

SOUTH PENINSULA ANNUAL SALMON MANAGEMENT REPORT, 1999

By

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TABLE OF CONTENTS

	<u>Page</u>
LIST OF APPENDICES	i
INTRODUCTION	1
South Peninsula Areawide Information	2
Introduction	2
Historical Salmon Production, 1908-1998	2
Commercial Salmon Harvests for the 1999 Season	2
South Unimak and Shumagin Islands June Fisheries	2
Introduction	2
Current Management Plan	3
1999 Season Summary	4
Southeastern District Mainland Fishery	6
Introduction	6
Effort Levels	7
Current Management Plan	7
Local Stocks Fisheries	8
Northwest Stepovak Section	8
Stepovak Flats Section	9
1999 Season Summary	9
South Peninsula Post June Fisheries	10
Introduction	10
Regulatory History	10
Immature Salmon Concerns	11
Current Management Plan	12
1999 Season Summary	12
Commercial Salmon Effort Levels and Harvests, July 1 – October 31	14
Chinook	14
Sockeye	14
Coho	14
Pink	15
Chum	15
Shumagin Islands 1999 Post June Harvest Summary	15
Southeastern District 1999 Post June Harvest Summary	16
South Central, Southwestern, and Unimak Districts 1999 Post June Harvest Summary	16

TABLE OF CONTENTS (Cont.)

	<u>Page</u>
Salmon Escapements.....	16
Introduction.....	16
Escapement by Species.....	17
Sockeye.....	17
Coho.....	17
Pink.....	18
Chum.....	18
Escapement by District.....	18
LITERATURE CITED.....	19
APPENDIX.....	21

LIST OF APPENDICES

	<u>Page</u>
APPENDIX A: AREAWIDE INFORMATION	
A.1. Map of the Alaska Peninsula Management Area, with the North and South Peninsula defined	22
A.2. Map of the Alaska Peninsula Management Area from Kupreanof Point to Scotch Cap with the South Peninsula salmon fishing districts defined	23
A.3. Map of the Alaska Peninsula Area from Kupreanof Point to McGinty Point (Southeastern District) with the statistical salmon fishing areas shown	24
A.4. Map of the Alaska Peninsula Area from McGinty Point to Arch Point (South Central District) with the statistical salmon fishing areas shown	25
A.5. Map of the Alaska Peninsula Area from Arch Point to Unimak Island (Southwestern District) with the statistical salmon fishing areas shown.....	26
A.6. Map of the Alaska Peninsula Area from Hague Rock to Unimak Pass (Unimak District) with the statistical salmon fishing areas shown	27
A.7. Number of limited entry permits and fishing effort in the South Peninsula, 1970-99	28
A.8. Map of the Alaska Peninsula Area from Kupreanof Point to Scotch Cap with the legal gear types by district shown	29
A.9. South Peninsula salmon catch and escapement by species and year, 1962-99.....	30
A.10. South Peninsula pink salmon catch and escapement by year, 1962-99	34
A.11. South Peninsula chum salmon catch and escapement by year, 1962-99	38
A.12. South Peninsula salmon harvest, all gear combined, by species and year, 1908-99.....	42
A.13. South Peninsula commercial salmon harvest, all gear combined, by species and day, 1999	45
A.14. South Peninsula commercial salmon harvest by species, statistical area, section, and district, 1999	47

LIST OF APPENDICES (Cont.)

	<u>Page</u>
A.15. South Peninsula commercial salmon harvest by species, district, and gear, 1999	15
A.16. South Peninsula emergency order summary, 1999	51

APPENDIX B: SOUTH UNIMAK AND SHUMAGIN ISLANDS JUNE FISHERIES

B.1. South Unimak and Shumagin Islands June commercial sockeye and chum salmon harvest, all gear combined, by year, 1911-99	58
B.2. Map of the South Unimak June fishery	60
B.3. History of regulations for the South Unimak and Shumagin Islands June commercial salmon fisheries, 1962-99	61
B.4. South Unimak and Shumagin Islands June fisheries commercial salmon harvest, all gear combined, by species and year, 1970-99	64
B.5. South Unimak June commercial salmon harvest, all gear combined, by species and year, 1970-99	65
B.6. Shumagin Islands June commercial salmon harvest, all gear combined, by species and year, 1970-99	66
B.7. South Unimak and Shumagin Islands June fisheries, sockeye salmon allocations versus actual harvest and allocations if Bristol Bay runs were perfectly forecasted, 1975-99	67
B.8. South Unimak June fishery, sockeye salmon allocations versus actual harvest and allocations if Bristol Bay runs were perfectly forecasted, 1975-99	68
B.9. Shumagin Islands June fishery, sockeye salmon allocations versus actual harvest and allocations if Bristol Bay runs were perfectly forecasted, 1975-99	69
B.10. South Unimak and Shumagin Islands June fisheries, number of fishing days and hours open to commercial fishing by year, 1975-99	70
B.11. South Unimak June test fishery salmon catches by species, date, and location, 1999	71
B.12. Shumagin Islands June test fishery salmon catches by species and date, 1999	72

LIST OF APPENDICES (Cont.)

	<u>Page</u>
B.13. South Unimak and Shumagin Islands commercial sockeye and chum salmon harvests, all gear combined, by day, 1999	73
B.14. South Unimak June commercial salmon harvest, all gear combined, by species and day, 1999	74
B.15. South Unimak June commercial purse seine salmon harvest by species and day, 1999	75
B.16. South Unimak June commercial drift gillnet salmon harvest by species and day, 1999	76
B.17. South Unimak June commercial set gillnet salmon harvest by species and day, 1999	77
B.18. Shumagin Islands Section commercial salmon harvest, all gear combined, by species and day, 1999	78
B.19. Shumagin Islands Section commercial purse seine salmon harvest by species and day, 1999	80
B.20. Shumagin Islands Section commercial set gillnet salmon harvest by species and day, 1999	81
B.21. South Unimak and Shumagin Islands June fisheries commercial sockeye and chum salmon harvests in percent by gear type and year, 1970-99	83
B.22. South Unimak and Shumagin Islands June fisheries combined commercial sockeye salmon harvests in percent by gear type and year, 1970-99	84
B.23. South Unimak and Shumagin Islands June fisheries commercial chum salmon harvests by gear type and year, 1970-99	85
B.24. South Unimak and Shumagin Islands June commercial fisheries sockeye to chum salmon ratios, all gear combined, by location and year 1960-99	86
B.25. South Unimak and Shumagin Islands June commercial fisheries combined sockeye to chum salmon ratios by location, gear type and year, 1970-99	87
B.26. Number and type of commercial salmon gear in the South Unimak and Shumagin Islands Section waters combined during June, by year, 1970-99	88

LIST OF APPENDICES (Cont.)

	<u>Page</u>
APPENDIX C: SOUTHEASTERN DISTRICT MAINLAND FISHERY	
C.1. Map of the Southeastern District Mainland fishery from Kupreanof Point to McGinty Point with the salmon sections defined	89
C.2. History of regulations for the Southeastern District Mainland commercial salmon fishery, 1970-99.....	90
C.3. Southeastern District Mainland commercial sockeye salmon harvest by gear, through July 25, 1970-99	91
C.4. Harvest of sockeye salmon considered to be Chignik bound by regulation in the Southeastern District Mainland, by gear, through July 25, 1970-99	92
C.5. Southeastern District Mainland CFEC permits fished by gear through July 25, 1970-99.....	94
C.6. Harvest of sockeye salmon considered to be Chignik bound by regulation in the Chignik, Cape Igvak, and Southeastern District Mainland Areas from 1964-99	95
C.7. Map of Kupreanof Point area with closed waters defined.....	98
C.8. Southeastern District Mainland commercial fishing effort and assignment of sockeye salmon harvests June 1 through July 25, 1985-99	99
C.9. Northwest Stepovak Section commercial salmon harvest, all gear combined, by species and day, 1999.....	100
C.10. Southeastern District Mainland commercial salmon harvest, all gear combined, by species and day, 1999.....	101
C.11. Southeastern District Mainland commercial purse seine salmon harvest by species and day, 1999	103
C.12. Southeastern District Mainland commercial set gillnet salmon harvest by species and day, 1999.....	104
C.13. Southeastern District Mainland commercial sockeye salmon harvest, by gear, for the entire season, 1970-99	106

LIST OF APPENDICES (Cont.)

	<u>Page</u>
APPENDIX D: SOUTH PENINSULA POST-JUNE FISHERIES	
D.1. Map of the South Peninsula from Kupreanof Point to Scotch Cap, with the general post June fishing area (Rock Island-Kupreanof Point), and Southeastern District Mainland area shown	107
D.2. Map of the South Peninsula with the areas effected by the Southeastern District Mainland and the post June Salmon Management Plans during 1993-97 defined	108
D.3. Map of the South Peninsula with those areas where fishing time could be allowed during July 6-19, 1993-97 defined.....	109
D.4. Map of Popof Island with the test fishing sites at Popof Head, Middle Set, and Red Bluff defined	110
D.5. Map of the South Peninsula post June fishery schedule during July 6-21 defined. Fishing may only be permitted in State waters (within three miles of shore)	111
D.6. Map of the South Peninsula with those areas where additional fishing time may be allowed during July 22-31 defined. Fishing may only be permitted in State waters (within three miles of shore)	112
D.7. Summary of the Shumagin Islands Section July salmon test fishery results, 1999	113
D.8. South Peninsula post June commercial salmon harvest, all gear combined, by species July 6-21, 1999	114
D.9. South Peninsula post June commercial salmon harvest, all gear combined, by species July 22-31, 1999	115
D.10. South Peninsula fall fishery (Sept. 1. – Oct. 31) commercial salmon harvest, all gear combined, by species and year, 1970-99.....	116
D.11. South Peninsula (minus the Southeastern District Mainland fishery July 1-25 salmon harvest) post June (July 1-Oct 31) commercial salmon harvest, all gear combined, by species and year, 1970-99.	117
D.12. South Peninsula post June commercial salmon harvest, all gear combined, by species and year, July 1-October 31, 1970-99	118

LIST OF APPENDICES (Cont.)

	<u>Page</u>
D.13. South Peninsula post June commercial salmon harvest, all gear combined, by species and year, July 1-October 31, 1909-99	119
D.14. South Peninsula post June commercial chinook salmon harvest by gear and year, July 1-October 31, 1970-99	122
D.15. South Peninsula post June commercial sockeye salmon harvest by gear and year, July 1-October 31, 1970-99	123
D.16. South Peninsula post June commercial coho salmon harvest by gear and year, July 1-October 31, 1970-99	124
D.17. South Peninsula post June commercial pink salmon harvest by gear and year, July 1-October 31, 1970-99	125
D.18. South Peninsula post June commercial chum salmon harvest by gear and year, July 1-October 31, 1970-99	126
D.19. Shumagin Islands Section post June commercial salmon harvest, all gear combined, by species and year, July 1-October 31, 1970-99	127
D.20. Southeastern District (minus the Southeastern District Mainland fishery July 1-25 salmon harvest) post June commercial salmon harvest, all gear combined, by species and year, July 1-October 31, 1970-99	128
D.21. Southeastern District fall fishery (Sept. 1-Oct. 31) commercial salmon harvest, all gear combined, by species and year, 1970-99.	129
D.22. South Central, Southwestern, and Unimak districts, combined, post June commercial salmon harvest, all gear combined, by species and year, July 1-October 31, 1970-99	130
D.23. South Central, Southwestern, and Unimak districts fall (Sept. 1 - Oct. 31) commercial salmon harvest, all gear combined, by species and year, 1970-99.....	131

APPENDIX E: SALMON ESCAPEMENT DATA

E.1. Method for calculating indexed total escapement.....	132
E.2. Historical sockeye salmon escapement summary for Orzinski Lake, Thin Point Lake and Middle Lagoon/Morzhovoi weirs.....	133

LIST OF APPENDICES (Cont.)

	<u>Page</u>
E.3. South Peninsula total indexed salmon escapements by species and year, 1962-99	134
E.4. South Peninsula total indexed sockeye salmon escapement by year, 1962-99.....	136
E.5. Sockeye salmon daily and cumulative escapement counts through the Orzinski Lake weir, 1999.....	137
E.6. South Peninsula total indexed pink salmon escapement by year, 1962-99	139
E.7. South Peninsula total indexed chum salmon escapement by year, 1962-99	140
E.8. South Peninsula total indexed salmon escapement by species, district and section, 1999	141

APPENDIX F: MANAGERS EDITION

F.1. Salmon escapement survey counts in the South Peninsula area, 1999	142
F.2. South Unimak and Shumagin Islands June fisheries, Southeastern District Mainland fishery, and post June fishery histories.	208

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
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68
69
70
71
72
73
74
75
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77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

INTRODUCTION

The Alaska Peninsula Salmon Management Area includes waters of the North Peninsula from Cape Menshikof west to Cape Sarichef, and waters of the South Peninsula from Kupreanof Point west to Scotch Cap on Unimak Island (Appendix A.1). This report describes those commercial salmon fisheries located on the South Peninsula, which is further divided into four districts: (1) the Southeastern District, consisting of waters between Kupreanof Point and McGinty Point; (2) the South Central District, consisting of waters between McGinty Point and Arch Point Light; (3) the Southwestern District, consisting of waters between Arch Point Light, False Pass, and Cape Pankof; and (4) the Unimak District, consisting of waters between Cape Pankof and Scotch Cap, including Sanak Island (Appendices A.2-A.6). The Southeastern District is further subdivided into two areas that have different management plans during part of the season; (1) the Shumagin Islands Section, consisting of the Shumagin Islands archipelago and (2) the Southeastern District Mainland (SEDM), consisting of Stepovak, Balboa, and Beaver Bays (Appendix A.3.).

The Alaska Department of Fish and Game (ADF&G) staff stationed at Sand Point and Cold Bay (Appendix A.2.) offices manage the South Peninsula commercial salmon fisheries. In 1990, the Sand Point staff assumed responsibility for managing salmon fisheries in the Southeastern District. The balance of the South Peninsula salmon fisheries are managed from Cold Bay.

Five species of Pacific salmon are commercially harvested in the Alaska Peninsula Salmon Management Area: chinook salmon *Oncorhynchus tshawytscha*, sockeye salmon *O. nerka*, coho salmon *O. kisutch*, pink salmon *O. gorbuscha*, and chum salmon *O. keta*.

Only Commercial Fisheries Entry Commission (CFEC) Area M purse seine, drift gillnet, and set gillnet permit holders are allowed to commercially harvest salmon in South Peninsula waters (ADF&G 1998). Most Area M salmon permits were utilized in the South Peninsula during 1999; 74 of 122 available purse seine permits recorded landings (lowest since 1975), as did 153 of 164 drift gillnet permits, and 82 of 115 set gillnet permits (Appendix A.7).

During recent years, a preponderance of the active purse seine and set gillnet permit holders fished South Peninsula waters throughout the season, while most of the active drift gillnet permit holders fished South Unimak waters during June and North Peninsula waters from July into September (Murphy et al. 1998). In South Peninsula waters, drift gillnet gear is only allowed by regulation in the Unimak District and the Ikatan Bay Section of the Southwestern District. Purse seine, hand purse seine, and set gillnet gear are permitted in most of the South Peninsula, however some gear restrictions do exist within specified areas (Appendix A.8).

South Peninsula Areawide Information

Introduction

Commercial salmon fisheries in South Peninsula waters date back to at least 1888 when canneries operated at Orzinski (Orzenoi) Bay and Thin Point Cove, but catch records are not available prior to 1908. Computerized fish ticket data have been available since 1970.

Historical Salmon Production, 1908-1998

Historically, South Peninsula salmon production has fluctuated dramatically for all species. Pink and chum salmon are the most abundant salmon species in the South Peninsula (Appendix A.9). Since 1962, annual pink salmon catch and escapement (excluding June migrants) has ranged from a low of 149,300 in 1973 to a high of 22,530,258 in 1995 (Appendix A.10). Since 1962, annual chum salmon catch and escapement (excluding June migrants) has ranged from a low 223,228 in 1975 to a high of 2,172,690 in 1994 (Appendix A.11).

The 1947-77 South Peninsula annual harvests for all species averaged approximately 3,000,000 salmon composed of 2,567 chinook, 591,844 sockeye, 26,747 coho, 1,523,900 pink, and 751,226 chum salmon (Appendix A.12). From 1978 through 1998, the South Peninsula annual harvest averaged about 10,600,000 salmon composed of 9,365 chinook, 2,225,241 sockeye, 260,869 coho, 6,736,166 pink, and 1,353,108 chum salmon. From 1989 through 1998, the South Peninsula annual harvest has averaged almost 12,000,000 salmon composed of 9,969 chinook, 2,563,470 sockeye, 279,053 coho, 7,854,226 pink, and 1,224,962 chum salmon (Appendix A.12).

Commercial Salmon Harvests for the 1999 Season

In 1999, the first South Peninsula commercial salmon landing occurred on June 11, and the last landing was recorded on September 29 (Appendix A.13). The 1999 South Peninsula commercial harvest was 12,405,876 salmon composed of 4,815 chinook, 2,948,267 sockeye, 192,485 coho, 8,443,343 pink, and 816,966 chum salmon. Most salmon were harvested in the Southeastern District (6,417,262 or 51.7%), while the respective South Central, Southwestern, and Unimak Districts accounted for 2,683,919 (21.6%), 2,323,919 (18.7%), and 980,776 (7.9%) (Appendix A.14). During 1999 in the South Peninsula, purse seine permit holders harvested 79.3% of the total harvest while drift gillnet permit holders harvested 8.4% and set gillnet permit holders harvested 12.2% (Appendix A.15.). The specific openings and closures as directed by emergency order are summarized in Appendix A. 16.

South Unimak and Shumagin Islands June Fisheries

Introduction

The first documented commercial harvests from the South Unimak and Shumagin Islands June fisheries occurred in 1911 (Appendices B.1., B.2., and A.3.). Sockeye salmon bound for Bristol Bay are the dominant stocks harvested by these fisheries (Eggers et al. 1991). During the early to

mid 1960s, the South Unimak and Shumagin Islands fisheries were open to commercial salmon fishing five days per week (Appendix B.3). During the late 1960s to early 1970s, the fisheries were open seven days per week regardless of the Bristol Bay sockeye salmon run strength. The seven-day per week fishing schedule was very controversial and caused many debates between Alaska Peninsula and Bristol Bay fishers. The controversy over the seven-day per week fishing schedule resulted in special Alaska Board of Fisheries (BOF) meetings to address this issue in the early 1970s.

In 1975, the BOF implemented an allocation plan in which the South Unimak and Shumagin Islands June fisheries would be granted an annual guideline harvest level (GHL) based on the projected Bristol Bay inshore sockeye salmon harvest. Based on historical catch data, 6.8% of the forecasted inshore Bristol Bay harvest was allocated to the South Unimak June fishery and 1.5% was allocated to the Shumagin Islands June fishery. Portions of the GHL were assigned to discrete time periods so that the harvest would be spread throughout the month of June. Concerns over large chum salmon harvests in the early 1980s resulted in a chum salmon cap that, if reached, would close the fishery for the remainder of June. Since inception in 1986, the chum salmon cap has been as high as 700,000 fish (1992-1997) and as low as 350,000 to 400,000 fish (1998-1999). Since 1984, various opening date restrictions have been placed on the fishery. From 1984 through 1989 a limit was placed the duration of fishing periods and the total days fished within a seven day period.

In 1990, several gear restrictions went into effect to further restrict harvest. Test fishing has been used by the department from 1990 through the present at the Shumagin Islands and, from 1994 to through the present at South Unimak, to determine sockeye to chum salmon ratios and to help manage for minimal chum harvest. The most recent BOF revision of the June salmon management plan was made in January 1998. For further details on historical harvests and allocations, see Appendices B.4.- B.10. For a more detailed regulatory history, see Appendix B.3. or Campbell et al. (1998) pages 5 through 12.

Current Management Plan

1. A "floating" GHL has been established for South Peninsula chum salmon harvested in June that can range from 350,000 to 650,000 salmon. This GHL is determined annually, based on an Arctic-Yukon-Kuskokwim (AYK) summer chum salmon harvest projection that is calculated from the previous year's harvest of summer chum salmon in AYK. The AYK summer chum salmon index group includes chum salmon harvested during Yukon River summer commercial and subsistence fisheries, the Kotzebue commercial fishery, the Norton Sound commercial fishery, and the Kuskokwim commercial fishery. Management concerns for specific chum salmon stocks in AYK are also a factor in determining the GHL.
2. In the South Peninsula June Fisheries, commercial test fishing for all gear types may open as early as June 10. However seine and drift gillnet permit holders may initially be allowed a six hour fishing period while set gillnet permit holders are permitted a minimum of 16 hours. If the sockeye to chum salmon ratio is 2 to 1 or greater, the fishing period may be extended for seine and drift gillnet permit holders. The set gillnet fishing period may be extended if the set gillnet sockeye to chum salmon ratio is equal to

or greater than the most recent 10-year average, regardless of the seine and drift gillnet ratios.

3. In the Unimak District during June, the shoreward end of a set gillnet may not be placed further than one half mile from the mean high water mark.
4. All salmon caught by CFEC permit holders must be retained, and each CFEC permit holder must report the number of salmon caught, including those taken but not sold, on an ADF&G fish ticket. For purposes of this section, "caught" means brought on board the fishing vessel.
5. In the Alaska Peninsula Area, an aircraft may not be used to locate salmon, one hour before, during, and one hour after a commercial salmon fishing period for the entire season (ADF&G 1998).

1999 Season Summary

Based on the Bristol Bay inshore harvest forecast, the 1999 South Unimak and Shumagin Islands June sockeye salmon GHLS were as follows (Geiger and Hart, 1999):

South Unimak	Shumagin Islands	Total
1,024,000	226,000	1,250,000

The chum salmon GHL for the 1999 season was 350,000-400,000 fish, based on the summer chum index in the A-Y-K during the 1998 season and management concerns for specific A-Y-K chum salmon stocks (ADF&G 1998).

Based on the 1999 sockeye salmon GHLS and chum salmon GHL, the department used the following criteria to set the tentative dates and durations of the initial fishing periods:

1. If sockeye to chum salmon ratios from the test fisheries were substantially higher than 2 to 1 on both June 8 and 9, a six hour commercial test fishery was likely to occur on June 10 from 6:00 AM until 12:00 NOON (setnet permit holders would have a 16 hour period). If fishers reported favorable sockeye to chum salmon ratios, ADF&G would consider extending the period. Fishing time for set gillnet permit holders could extend independently of seine and drift gillnet permit holders if the set gillnet sockeye to chum salmon ratio remained at or above the most recent 10-year average and the chum and sockeye harvests were below their respective GHLS. If a commercial fishery did not occur on June 10, but test fishing produced a sockeye to chum salmon ratio greater than 2 to 1 for two consecutive days, there would be a short commercial test fishery on June 11 or 12.
2. If a commercial fishery was not allowed on June 10-12, there would be a commercial test fishery for a minimum of six hours (16 hours for set gillnet permit holders) on June 13 unless there were indications that chum salmon abundance was unusually high. If fishers reported favorable sockeye to chum salmon ratios, ADF&G would consider extending the fishing. If

the period was not extended, a second fishing period would be announced after the first commercial test fishery harvest was analyzed. The length and time of the second fishing period would depend on the fishery performance during the first fishing period. Because of the low chum salmon GHL, ADF&G would need to consider the number of chum salmon harvested and the sockeye to chum salmon ratio when establishing subsequent fishing periods.

ADF&G test fishing programs were used to assist management biologists in establishing the opening dates of both the South Unimak and Shumagin Islands June fisheries (Appendix B.11 and B.12.). The results of both test fisheries were as follows:

<u>Test Fishery Sockeye to Chum Salmon Ratios</u>								
	5-Jun	6-Jun	7-Jun	8-Jun	9-Jun	10-Jun	11-Jun	12-Jun
Shumagin Islands	0.3:1	2.2:1	1.3:1	1.4:1	0.5:1	0.9:1	2.5:1	2.7:1
South Unimak			1.1:1	1.6:1	2.4:1	6.5:1		

In the South Unimak fishery, based on favorable ratios from the June 9 and 10 test fisheries, an eight hour fishing period (16 hours for set gillnet operators) was announced for June 11. Reports from the grounds indicated that sockeye to chum salmon ratios were high and the fishing period was extended eight hours for seine and drift gillnet gear. Reports from set gillnet fishers indicated that the sockeye to chum salmon ratio was greater than 9.9:1 (the 10-year set gillnet average ratio) and the fishery was extended an additional 17 hours until 3:00 p.m. June 12. The June 11 actual setnet harvest was 1,519 sockeye and 223 chum salmon, a ratio of 6.8:1. Consequently, the fishing period for set gillnet permit holders was not extended further. Harvest from all gear combined on June 11 was 53,764 sockeye and 8,906 chum salmon. The next fishing period was announced for South Unimak on June 13 and was repeatedly extended until 3:00 PM June 21 when the sockeye salmon GHL was reached.

The Shumagin Islands fishery initially opened on June 13 for 10 hours (16 for set gillnet gear) after two consecutive days of sockeye to chum salmon ratios greater than 2.0:1 from the ADF&G test fishery. The fishery was extended repeatedly, based on verbal reports from the grounds and the previous days harvest, until June 18 at 1:00 PM when the sockeye salmon GHL was reached.

The 1999 sockeye salmon daily harvest levels were higher than in the past three years in both the South Unimak and Shumagin Islands June fisheries (Appendix B.13). After nearly continuous fishing from June 11 through June 21, 1,106,208 sockeye (8.0% over the allocation) and 186,886 chum salmon were harvested at South Unimak (Appendix B.14). During the 1999 South Unimak June fishery, purse seine permit holders harvested 232,779 sockeye and 52,314 chum salmon (Appendix B.15), drift gillnet permit holders harvested 836,876 sockeye and 128,723 chum salmon (Appendix B.16), and set gillnet permit holders harvested 36,553 sockeye and 5,849 chum salmon (Appendix B.17).

A total of 269,191 sockeye (19.1% over the allocation) and 58,420 chum salmon were harvested in the Shumagin Islands Section (Appendix B.18). During the 1999 Shumagin Islands June fishery,

purse seine permit holders harvested 200,108 sockeye and 54,439 chum salmon (Appendix B.19), and set gillnet permit holders harvested 69,083 sockeye and 3,981 chum salmon (Appendix B.20).

Purse seine permit holders harvested 21.0% of the sockeye and 28.0% of the chum salmon at South Unimak, and 74.3% of the sockeye and 93.2% of the chum salmon in the Shumagin Islands Section (Appendix B.21). Drift gillnet permit holders harvested 75.7% of the sockeye and 68.9% of the chum salmon at South Unimak. Set gillnet permit holders harvested 3.3% of the sockeye and 3.1% of the chum salmon at South Unimak, and 25.7% of the sockeye and 6.8% of the chum salmon in the Shumagin Islands Section. For both fisheries combined, purse seine permit holders harvested 31.5% of the sockeye (Appendix B.22), and 43.5% of the chum salmon (Appendix B.23). For both fisheries combined, set gillnet permit holders harvested 7.7% of the sockeye (105,636), and 4.0% (9,830) of the chum salmon.

The June fisheries sockeye to chum salmon harvest ratios were 5.9 to 1 at South Unimak and 4.6 to 1 in the Shumagin Islands Section. The overall ratio for both fisheries combined, was 5.6 to 1 (Appendix B.24). In the South Unimak fishery, the sockeye to chum salmon ratio was 4.4:1 for purse seine, 6.5:1 for drift gillnet, and 6.2:1 for set gillnet permit holders (Appendix B.25). In the Shumagin Islands fishery, the sockeye to chum salmon ratio was 3.7:1 for purse seine, and 17.4:1 for set gillnet permit holders. In 1999, 61 purse seine (lowest since 1979), 152 drift gillnet, and 64 set gillnet permit holders fished commercially for salmon in the South Unimak and Shumagin Islands June fisheries (Appendix B.26).

The total 1999 South Unimak and Shumagin Islands June sockeye salmon harvest was 1,375,399 (10.0% over the allocation). The 1999 South Unimak and Shumagin Islands combined June chum salmon harvest was 245,306, which is 154,694 fish below the upper GHL range of 400,000 chum salmon and 104,694 fish below the lower GHL range of 350,000.

Southeastern District Mainland Fishery

Introduction

The Southeastern District Mainland (SEDM) fishery takes place on the south side of the Alaska Peninsula, and occurs in Beaver, Balboa, and Stepovak Bays (Appendix C.1). The SEDM fishery is composed of the East Stepovak, Stepovak Flats, Northwest Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections. The BOF originally established the SEDM salmon management plan in 1985, updated it in 1991, fishery, harvest averages that reflect the separate revisions of the management plan (i.e. 1985-91, 1992-95, 1996-97, and 1998) are compared to the 1999 harvest. For a detailed regulatory history, see Appendix C. 2. and Campbell et al. (1998 pp. 18-21). Detailed historical harvest and allocation information are in Appendices C.3 through C.8. The original SEDM management plan was based on the Cape Igvak Salmon Management Plan in the Kodiak Management Area (KMA). The SEDM fishery is currently allocated 6% of the total sockeye salmon considered to be bound for the Chignik Management Area (CMA). The sockeye salmon considered to be bound for the CMA in regulation include 100% of sockeye caught in the CMA through July 25; 80% of the sockeye caught in the Cape Igvak Section of the KMA through

July 25, and 80% of the sockeye caught in the SEDM on the Alaska Peninsula through July 25 (excluding the Northwest Stepovak Section harvest beginning on July 1).

Effort Levels

Since 1978, set gillnet effort has increased substantially in the SEDM fishery. The number of set gillnet permits fished through July 25 increased from 23 in 1978 to a high of 68 permits in 1996 (Appendix C.5). Previously, many permit holders operated both set gillnet and purse seine gear (they received limited entry permits for each gear type). During the late 1970s and throughout the 1980s, many of the multiple permit holders sold or transferred their set gillnet permit and retained their purse seine permit. This action increased effort in the SEDM fishery since many permits previously used part-time were now fished full-time. The number of SEDM set gillnet permits fished through July 25 averaged 51 from 1985-91, 59 from 1992-95, and 61 from 1996-97, but dropped to 45 during 1998 (Appendix C.8). In 1999, 63 set gillnet permits were fished prior to July 25 in the SEDM.

The number of SEDM set gillnet landings through July 25 have generally increased in recent years with a high of 1,173 reported in 1997 (Appendix C.8). Set gillnet landings in the SEDM, through July 25, averaged 440 from 1985-91, 702 from 1992-95, and 1,169 during 1996 and 1997, but dropped to 340 in 1998. In 1999, only 649 set gillnet landings were reported in the SEDM through July 25.

Purse seine effort through July 25 has also fluctuated dramatically since 1986, and ranged from zero in 1994 to a high of 69 in 1990, with 27 permits fished in 1999. The number of purse seine permits fished in the SEDM fishery through July 25 averaged 28 from 1985-91, 21 from 1992-95, 19 from 1996 through 1997, and 18 in 1998 (Appendix C.8).

The number of purse seine landings, through July 25, has also fluctuated dramatically from zero in 1994 to a high of 131 in 1990, with 30 landings reported in 1999. Purse seine landings in the SEDM through July 25 averaged 56 from 1985-91, 32 from 1992-95, 35 from 1996 through 1997, and 23 in 1998 (Appendix C.8).

Current Management Plan

Under the current SEDM management plan (Campbell and Witteveen 1999):

- 1) Prior to July 1, the SEDM will be managed on an allocation based on the strength of the Chignik sockeye salmon runs as described in 5 AAC 09.360(a)(1) and (b)-(h) and 80% of the sockeye salmon caught will be considered Chignik-bound. However, beginning July 1, all sockeye salmon caught in the Northwest Stepovak Section will be considered 100% local fish and not counted toward the Chignik allocation. The Northwest Stepovak Section, outside Orzinski Bay, may open to commercial salmon fishing during July 1 through July 25, if the Orzinski sockeye salmon escapements goals are being met, and the CMA sockeye salmon harvest is expected to be more than 600,000 through July 25. The BOF mandated fishing schedule for the Northwest Stepovak Section, excluding Orzinski Bay,

from July 1 through July 25 will not exceed four days during a seven-day period. The maximum number of consecutive fishing days is two.

- 2) Beginning July 1, Orzinski Bay will be managed entirely on local stocks. The Stepovak Flats Section will continue to be managed for chum salmon returning to Stepovak Flats streams throughout the entire season, however 80% of the sockeye salmon caught in this section through July 25 will be considered Chignik-bound fish (Appendix C.1).
- 3) The BOF allocated 6% of the total Chignik bound sockeye salmon harvest through July 25 to the SEDM fishery. The BOF established this percentage during their January 1996 meeting in an attempt to maintain traditional harvest levels of Chignik-bound sockeye salmon in the SEDM fishery and to compensate for the increased area managed for local Orzinski Lake sockeye salmon.
- 4) The BOF directed the department to consider an extension of the Kupreanof Point closed waters area, as described in 5 AAC 09.350 (37), through October 31, by emergency order. The Kupreanof Point closed waters extension will remain in effect if the waters specified in 5 AAC 15.350(20) are closed to conserve coho salmon in the CMA.

The total Chignik sockeye salmon harvest is calculated by adding 100% of the CMA sockeye harvest, 80% of the Cape Igvak Section (KMA) sockeye harvest through July 25, and 80% of the SEDM sockeye harvest through July 25, excluding 100% of the sockeye caught within the Northwest Stepovak Section from July 1 through July 25.

There are two distinct sockeye salmon runs into the Chignik Lakes system, the Black Lake and the Chignik Lake runs. The Black and Chignik lakes sockeye salmon runs overlap (transition period) during late June to early July (Owen and Sarafin 1998). During the transition period the strength of the second run (Chignik Lake) cannot be evaluated. In order to prevent overharvest of the second run during the transition, the Cape Igvak and SEDM fisheries (except the Northwest Stepovak Section beginning July 1) are usually closed. However, fishing may be allowed in the CMA to harvest excess early run sockeye salmon, even though second run fish are present.

Local Stocks Fisheries

Northwest Stepovak Section. Prior to July 1, the entire SEDM, including the Northwest Stepovak Section, is managed on the basis of the strength of the Chignik Lakes sockeye salmon runs. The Northwest Stepovak Section is managed on the strength of the local Orzinski Lake sockeye salmon run from July 1 through July 25. However, the strength of Chignik Lakes sockeye salmon runs must be considered when establishing fishing periods in the Northwest Stepovak Section through July 25. Beginning July 1, all sockeye salmon caught within the Northwest Stepovak Section are considered to be Orzinski Lake stock. Eighty percent of those sockeye salmon caught through July 25 in the remainder of the SEDM fishery are considered to be from the Chignik Lakes system's runs. After July 25, management of the area shifts to predominately local pink salmon; however, other local stocks (sockeye, chum, and coho salmon) may be considered when establishing fishing periods.

Orzinski Lake sockeye salmon escapements were assessed using a weir from 1935 through 1941 and most recently from 1990 through 1999 (Appendix E.5). Orzinski Lake sockeye salmon escapement requirements were developed by time periods using historical aerial surveys and weir counts. The Orzinski Lake sockeye salmon escapement goal range is 15,000-20,000 adult fish. The escapement goal was first implemented during the 1991 season. From 1990 through 1999, the sockeye salmon escapement averaged about 28,000, and ranged from a high of 40,000 in 1991 to a low of about 15,000 in 1990 and 1999. Since 1990, July 10 has been the average date when 50% of the total escapement goal of 15,000-20,000 adult sockeye salmon has been achieved. In 1999, the Orzinski Lake weir was operated from June 12 through July 30 and 12,579 sockeye salmon were counted through the weir (Appendix E.5). Based on aerial surveys conducted after the weir was removed, approximately 2,400 additional fish were estimated entering Orzinski Lake. This produced a total estimated sockeye salmon escapement of 15,000 fish.

Stepovak Flats Section. Commercial salmon fishing in the Stepovak Flats Section is managed on the basis of chum salmon returning to Stepovak Flats streams. However, 80% of the sockeye salmon harvested in this section through July 25 are considered bound for the Chignik Lakes system, and included in the 6.0% allocation criteria stated in the current SEDM salmon management plan. The entire Stepovak Flats Section is closed to salmon fishing by regulation beginning July 29 to protect schooling chum salmon, which are usually needed to achieve escapement requirements.

1999 Season Summary

The 1999 forecast for the total harvest of Chignik bound-sockeye salmon was 649,000 salmon for the first run (Black Lake) and 1,035,000 salmon for the second run (Chignik Lake) (Owen and Sarafin 1999). The forecast indicated that a fishery could occur in the SEDM targeting Chignik-bound sockeye salmon since a harvest of at least 600,000 sockeye salmon was expected in the CMA. The Chignik first run was stronger than expected and commercial fishing was allowed in the CMA beginning on June 13. The SEDM opened to commercial salmon fishing on June 15 and a total of eight days of fishing time was allowed during June (Appendix C.10.).

The 1999 Chignik second run was also well above the forecast. The SEDM fishery was allowed two days of fishing during July, prior to July 25, targeting sockeye salmon considered to be bound for the Chignik Lakes system. The SEDM total sockeye salmon harvest prior to July 25 was 217,026 fish. The 1999 estimated Chignik component of the SEDM harvest was 173,621 sockeye salmon, 5.9% of the total CMA-bound sockeye salmon harvest through July 25 (Appendix C.4 - C.6.). The 1999 Northwest Stepovak Section sockeye salmon harvest through July 25 was 15,258 fish, all of which occurred prior to July 1 (Appendix C.9). There was no harvest in Orzinski Bay or the remainder of the Northwest Stepovak Section during July due to below average sockeye salmon escapement into Orzinski Lake.

The 1999 SEDM annual salmon harvest (entire season) was 267 chinook, 457,565 sockeye, 20,270 coho, 857,589 pink, and 56,938 chum salmon (Appendix C.10). Purse seine permit holders harvested 57 chinook, 47,929 sockeye, 5,415 coho, 716,294 pink, and 21,209 chum salmon (Appendix C.11). Set gillnet permit holders harvested 210 chinook, 409,636 sockeye, 14,855 coho,

141,295 pink, and 35,729 chum salmon (Appendix C.12). The purse seine harvest accounted for 10.5%, and set gillnet 89.5% of the annual SEDM sockeye salmon harvest (Appendix C.13).

South Peninsula Post June Fisheries

Introduction

Until 1974, the South Peninsula post June salmon fisheries were generally open five days per week, with a season closure on August 10 to allow adequate escapement and maintain product quality (McCullough 1995). During 1974 and 1975, the fisheries were severely restricted to rebuild pink salmon runs. From about 1976 to 1991, the salmon fisheries were managed by emergency order based on local stock run strength. From July 6 to about July 18 fishing periods were based on chum salmon run strength while from July 18 through about August 20 periods were based primarily on pink, and in some areas on chum salmon, run strength. Fishing continued into late August in years of strong pink salmon runs. Migratory salmon were also harvested during these openings, and in some years contributed substantially to the total post June harvest. Before 1992, South Peninsula waters east of Rock Island were opened to commercial salmon fishing about July 6, except in the SEDM fishery, which has been managed through July 25 on a separate management plan (5 AAC 09.360. Southeastern District Mainland Salmon Management Plan; Appendix D.1). Beginning September 1, fishing periods were established by emergency orders based on local coho salmon run strength, and to a lesser degree on pink and chum salmon runs.

Regulatory History

In November 1991, the BOF established the Post June Salmon Management Plan for the South Alaska Peninsula (5 AAC 09.366; McCullough 1995). Under this new plan, commercial salmon fishing from July 6-19 would be restricted to terminal fishing areas opened by emergency order, based on local stock run strength as determined by harvests and escapements. The balance of the South Peninsula, which during previous seasons opened in post June fisheries, would remain closed (Appendix D.2). The BOF decided that local pink and chum salmon could be caught in terminal areas early in the season, without sacrificing product quality, while still allowing migratory salmon to pass through South Peninsula waters. The terminal areas included Zachary Bay, the northern portion of Pavlof Bay, and the Cold Bay, Thin Point, Canoe Bay, and Morzhovoi Bay sections (Appendix D.3). The BOF concluded that after July 19, South Peninsula permit holders needed to harvest pink salmon in their traditional cape fishing areas to maintain product quality. From July 20 until the close of the season, the entire South Peninsula could be opened to commercial salmon fishing by emergency order based on local run stock strength (except in the Southeastern District Mainland fishery through July 25; ADF&G 1996).

The Stepovak-Shumagin Setnet Association sued the BOF in early 1992, to stop the implementation of the Post June Salmon Management Plan for the South Alaska Peninsula (5 AAC 09.366). On July 10, 1992, Alaska State Superior Court Judge Hopwood (Third Judicial District, Kodiak) granted an injunction staying the enforcement of the new management plan. On July 13, management of the post June fisheries reverted back to pre 1992 policies (Shaul et al. 1993).

In March 1993, the Alaska State Superior Court reconsidered the 1992 injunction staying the enforcement of the Post June Salmon Management Plan. After reconsideration, the court agreed with the State of Alaska and reinstated the Post June Salmon Management Plan. That version of the post June management plan was fully implemented during the 1993 through 1997 commercial fishing seasons (Shaul and Campbell, 1997). The Post June Salmon Management Plan was most recently revised in January 1998.

For this section of the report, non-conventional periods are used to average harvest figures. The authors feel these dates better represent the historical nature of the South Peninsula post June fisheries. The 1978 through 1992, 1993 through 1997, and 1998 periods are used for most historical average harvests, and are compared to the 1999 harvests. The 1978-92 average harvests represents catches after Alaska salmon populations had recovered from low runs during the 1960s and 1970s. The 1993-97 averages are used because during those years only a few terminal harvest areas were open in post June fisheries from July 6-19. The current management plan went into effect in 1998 and was used in 1998 - 1999 without any changes.

Immature Salmon Concerns

The 1991 BOF decision to allow commercial salmon fishing only in limited areas within South Peninsula waters was made due to concerns for immature salmon (chinook, sockeye, and chum) which are inadvertently gilled in normal purse seine gear fishing operations (McCullough and Shaul 1992).

The department first became aware of immature salmon catches in 1963. The presence of immature salmon in South Peninsula waters has warranted restrictions to commercial fishing in some years. These restrictions were applied to all gear types, in affected areas during late June into July in 1963, 1968, 1969, 1974, 1979, and for purse seine fishing only during the 1989-92, 1994 (McCullough et al. 1995), and 1999 seasons.

Immature salmon have been most prevalent in the Shumagin Islands Section and the concern for catching immature salmon is restricted to purse seine gear. Under current regulations, seine mesh size may not exceed 3-1/2 inches except for the first 25 meshes above the lead line, which may not exceed 7 inches (ADF&G 1998). The gillnet gear has larger mesh size (minimum of 5-1/4 inches) which allows the immature salmon to pass through unaffected. After 1979, regulations were adopted curtailing only purse seine fishing in affected areas (McCullough 1995). Immature salmon usually migrate out of the area by July 23, although in 1992 closures remained in effect until July 29.

In 1990, an ADF&G test fishing program was instituted in the Shumagin Islands to determine the presence and abundance of immature salmon in South Peninsula waters prior to commercial fishing periods in July. In the Shumagin Islands Section, most purse seine fishing effort occurs in the near shore waters of Popof Island from Popof Head to Red Bluff, so test fishing sites were established in those areas (Appendix D.4).

Current Management Plan

During their January 1998 meeting, the BOF made the following changes affecting the post June management plan:

1. For the period from July 6 through 21: six 24 hour fishing periods may be permitted, each fishing period must be followed by a closure of at least 48 hours in non-terminal locations outside of the Southeastern District Mainland (Appendix D.5.). The terminal areas for July 6 through 21 include the northern portion of Pavlof Bay (north of the latitude of Black Point), the southern portion of Zachary Bay (282-35), and the Cold Bay, Morzhovoi Bay, Thin Point, and Canoe Bay sections.
2. For the period from July 22 through 31: fishing time will be limited in non-terminal areas, outside of the Southeastern District Mainland (prior to July 26), to three periods not to exceed 36 hours in duration and interspersed by closures of at least 48 hours. The terminal areas during the July 22 through 31 time period include the northern portion of Pavlof Bay (north of the latitude of Black Point), the southern portion of Zachary Bay (282-35), the Cold Bay, Morzhovoi Bay, Thin Point, Canoe Bay, Deer Island, Belkofski Bay, and Mino Creek-Little Coal Bay sections, the Stepovak Flats Section from July 26 through 28, and the area near Suzy Creek (281-65) after July 25. The amount of fishing area considered "terminal" was increased during this period. Fishing in non-terminal areas could not begin before noon on July 23 (during this period) (Appendix D.6).
3. A 60,000 coho salmon harvest cap was established for non-terminal areas during July 22 through 31.

1999 Season Summary

During their January 1998 meeting, the BOF changed the earliest general opening date of the post June fishery in non-terminal areas from July 20 to July 6. Therefore, in 1998 and 1999, the ADF&G test fish program in the Shumagin Islands, to assess the presence of immature salmon, was conducted in early July instead of mid July when concerns for catching immature salmon normally occur.

The test fishing results on July 1-3 indicated that the abundance of immature salmon was below the BOF mandated threshold of 100 immatures per set to restrict fishing (ADF&G 1998). However, test fishing on July 4 and 5 resulted in an average of 168 and 176 immature salmon per set respectively (Appendix D.7), and as a result, the South Peninsula fishery was opened on July 6 with closed water restrictions for purse seine gear in areas around Popof and Korovin Islands. Test fishing on July 7 indicated a significant decline in the presence of immature salmon (58 immatures per set) and no further fishing restrictions were required for immature salmon.

In accordance with the current South Peninsula post June salmon management plan (Campbell et al. 1999) and exclusive of the SEDM fishery, most of the South Peninsula opened to commercial salmon fishing on July 6 for 21 hours, from 12:01 AM until 9:00 PM. The five subsequent fishing periods in non-terminal areas through July 21 were for 24 hours each from 9:00 PM until 9:00 PM.

The July 6 through July 21 commercial salmon harvest from non-terminal areas was 755 chinook, 567,378 sockeye, 25,452 coho, 446,393 pink, and 113,048 chum salmon (Appendix D.8). The 1999 South Peninsula July 6-21 salmon harvest from terminal areas was 10 chinook, 20,776 sockeye, 467 coho, 2,883 pink, and 1,732 chum salmon.

From July 22-31, commercial salmon fishing in the South Peninsula, outside “terminal areas” and outside the SEDM from July 22 through July 25, may be allowed for a maximum of three 36-hour fishing periods interspersed by 48-hour closures. In addition, a 60,000 coho salmon harvest cap was in effect from July 22 through July 31 in the entire South Peninsula except for those areas designated as terminal harvest locations and the SEDM through July 25.

Historically, large numbers of coho salmon have been caught during late July in South Peninsula fisheries. In 1999, only 7,800 coho salmon were caught during the July 21 fishing period in the non-terminal areas of the South Peninsula. The department anticipated that coho salmon catches in non-terminal areas during the July 23-24 fishing period would remain below the 60,000 coho cap and no restrictions in fishing areas were implemented during the period.

Only 12,400 coho salmon of the 60,000 non-terminal area coho salmon cap were caught during the July 23-24 fishing period. Due to the relatively low coho salmon catches, ADF&G again opened all non-terminal areas during the succeeding two late July fishing periods..

The entire South Peninsula (including the SEDM catches from July 26-31) non-terminal harvest during July 22-31 included 444 chinook, 258,712 sockeye, 57,918 coho (96.5% of the coho cap), 762,773 pink, and 97,852 chum salmon (Appendix D.9). The South Peninsula (including the SEDM terminal areas) terminal area harvest during July 22-31 was 0 chinook, 15,607 sockeye, 348 coho, 296,313 pink, and 13,556 chum salmon.

The SEDM was closed to commercial salmon fishing from August 21 through August 31, and the Shumagin Islands Section was closed from August 23 through August 31 to allow for additional escapements of pink and chum salmon. Product quality began to deteriorate by mid August, and markets were limited. August 18 was the last date during August that fishing occurred in that portion of the South Peninsula west of the Southeastern District due to the lack of a market for pink and chum salmon.

Historically, the South Peninsula fall fishery opens September 1 and commercial salmon fishing periods are primarily based on local coho salmon catch per unit effort (CPUE) and in some areas on late chum salmon runs. From 1989 through 1998, the South Peninsula fall fishery average harvest was 105,392 salmon composed of 19 chinook, 43,581 sockeye, 25,812 coho, 1,043 pink, and 34,937 chum salmon (Appendix D.10.). The 1999 fall harvest was 151,719 salmon composed of 12 chinook, 118,064 sockeye, 17,622 coho, 12,353 pink, and 3,668 chum salmon (Appendix D.10 and A.13).

The 1999 South Peninsula (minus the SEDM July 1-25 harvest) post June (July 1-October 31) commercial salmon harvest was 1,580 chinook, 1,355,842 sockeye, 191,585 coho, 8,369,899 pink, and 536,270 chum salmon (Appendix D.11).

Commercial Salmon Effort Levels and Harvests, July 1-October 31

Most South Peninsula post June fishing periods are based on local pink and chum salmon run strengths. However, fishing time in the SEDM (after July 25), Thin Point Cove, Morzhovoi Bay, and during the fall fisheries are also determined by the strength of local sockeye and coho salmon runs.

The number of CFEC permits fished in South Peninsula waters (including the SEDM) during the period from July 1-October 31 more than doubled between 1978 (123 permits) and 1989 (274 permits; Appendix D.12). However, the number of permit holders who fished declined steadily from the peak year of 1989 (274) to a low in 1997 (168) with a slight rebound in 1998 (209). In 1999, 185 CFEC permits were fished between July 1-October 31.

Since 1992, the South Peninsula, including the SEDM, post June average harvests of sockeye have increased, while the chinook, coho, pink, and chum salmon average catches have generally decreased (Appendix D.13). The South Peninsula post June total salmon harvest declined dramatically in 1996. All catches except sockeye salmon (due to a large catch in the SEDM) declined even further in 1997, but rebounded in 1998 and 1999. The 1999 South Peninsula post June (July 1-end of season; including SEDM July 1-25) total harvest was 10,577,815 salmon (highest since 1995) and was composed of 1,619 chinook, 1,403,036 sockeye, 192,480 coho, 8,412,751 pink, and 567,929 chum salmon (Appendix D.13).

Chinook. The 1999 South Peninsula post June chinook salmon harvest of 1,619 was below the 1978-92 and 1993-97 average harvests and 1998 harvest of 4,004, 2,316, and 2,100 salmon, respectively (Appendix D.14). The largest reported chinook salmon catch of 12,833 occurred in 1983.

Sockeye. The 1999 South Peninsula post June sockeye salmon harvest of 1,403,036 was the highest on record. The 1978-92 and 1993-97 average harvests and 1998 harvest were 521,634, 605,449, and 882,078 salmon, respectively (Appendix D.15).

Coho. In the South Peninsula, coho salmon is the only species which has long term post June harvest records available (Appendix D.13). Historically, South Peninsula coho salmon catches have demonstrated long periods of varying annual abundance. From 1923 through 1946, coho salmon catches fluctuated but maintained a relatively high level. From 1947 through 1958, the average was about one third of the 1923-46 harvest level. The 1959-77 harvests were very low, with only 67 coho salmon caught in 1975 (from 1970 through 1977 only limited fishing periods occurred due to weak pink salmon runs). After 1977, coho salmon harvests increased substantially, as Alaska salmon stocks began to recover from low runs during the 1960s and 1970s, and averaged 257,530 fish from 1978-98. The largest reported coho salmon catch was 505,278 in 1988.

The 1999 South Peninsula post June coho salmon harvest of 192,480 was above the 1998 harvest of 153,694, but below both the 1978-92 and 1993-97 average harvests of 277,093 and 219,609 salmon, respectively (Appendix D.16).

Pink. Pink salmon are the most abundant salmon species produced in South Peninsula streams (Murphy 1992). The 1999 South Peninsula post June pink salmon harvest of 8,412,751 was the second highest since 1994, and above the 1978-92 and 1993-97 average harvests of 5,728,901 and 7,224,956 salmon, respectively as well as above the 1998 harvest of 7,566,341 salmon (Appendix D.17).

During 1996 and 1997, very low prices and smaller than expected pink salmon runs led to reduced fishing effort and a drastic reduction of pink and chum salmon harvests. The 1999 post June pink salmon harvest was above the 8,000,000 preseason forecast but low prices and limited markets continued to restrict pink salmon harvests. Future pink and chum salmon harvests may continue to be limited by low prices and lack of markets, rather than the availability of fish.

Chum. Chum salmon are the second most abundant salmon species produced in South Peninsula streams (Murphy 1992). The 1999 South Peninsula post June chum salmon harvest of 567,929 was well below both the 1978-92 and 1993-97 average harvests of 919,953 and 795,129 salmon, respectively, but above the 1998 harvest of 465,907 salmon (Appendix D.18). The largest reported chum salmon catch of 1,593,590 occurred in 1994, and is attributed to an exceptionally large return of late run chum salmon in the Volcano Bay Section of the Southwestern District. The 1999 post June chum salmon harvest was 76% of the 750,000 preseason forecast. Low prices and limited markets continued to restrict chum salmon harvests.

Shumagin Islands Section 1999 Post June Harvest Summary

The 1999 Shumagin Islands Section post June (July 1-October 31) total salmon harvest of 4,685,991 was composed of 1,410 chinook, 724,778 sockeye, 143,244 coho, 3,546,717 pink, and 269,842 chum salmon (Appendix D.19). The 1999 Shumagin Islands post June chinook salmon catch was similar to the 1993-97 average harvest (1,502 fish) and the 1998 harvest of 1,505 salmon. The post June coho and chum salmon catches were above the 1993-97 average harvests (136,035 and 166,888 fish respectively) and the 1998 harvests of 83,032 and 133,114 fish respectively. The sockeye salmon catch was well above the 1993-97 average harvest (168,951 fish), above the 1998 harvest of 353,650 and was the highest harvest on record. The 1999 Shumagin Islands post June pink salmon catch was above the 1993-97 average harvest (2,133,313 fish), above the 1998 harvest of 1,900,291 and was the second highest harvest on record.

From the mid 1970s through 1995, the effort levels and the number of landings increased for all gear types in the Shumagin Islands Section post June fishery. Both effort levels and the number of landings declined during the 1996 and 1997 seasons, but have rebounded slightly during 1998 and 1999. From 1993 through 1997, the effort levels averaged 105 permits with 107 permits that were fished in 1998 (Appendix D.19). During the 1999 season, 102 permit holders participated in the Shumagin Islands Section post June fishery. From 1993-97, the average number of annual landings was 895 and in 1998 the number of annual landings was 1475. During the 1999 post June fishery, permit holders made 1,960 deliveries (second highest on record) from the Shumagin Islands Section.

Southeastern District 1999 Post June Harvest Summary

The Southeastern District (minus the SEDM July 1-25) post June harvests from 1978–92 averaged 3,173 chinook, 309,200 sockeye, 218,147 coho, 2,656,108 pink, and 427,796 chum salmon (Appendix D.20). The 1993 through 1997 harvests averaged 1,814 chinook, 298,438 sockeye, 170,147 coho, 3,179,405 pink, and 246,479 chum salmon. Much of the increased harvest was the result of a record harvest of almost 7,500,000 pink salmon in 1995. However, the 1996 and 1997 Southeastern District pink salmon runs were much lower than projected and fishing periods were limited in the post June fisheries. The pink salmon runs increased during 1998 and 1999. The 1999 Southeastern District (minus the SEDM July 1-25) post June salmon harvest was 5,809,217 and was composed of 1,493 chinook, 965,317 sockeye, 162,616 coho, 4,361,401 pink, and 318,390 chum salmon.

The 1999 Southeastern District fall fishery opened on September 1, and the last landing was recorded on September 29. The 1999 Southeastern District fall fishery harvest was 12 chinook, 117,902 sockeye, 15,270 coho, 12,353 pink, and 3,581 chum salmon. Coho, chinook, and chum salmon harvests were below the most recent 10-year average (1989-1998) while pink salmon harvests were above the most recent 10-year average and sockeye salmon harvests were the highest on record (Appendix D.21).

South Central, Southwestern, and Unimak Districts 1999 Post June Harvest Summary

The 1999 South Central, Southwestern, and Unimak districts combined post June harvest of 4,672,959 salmon was composed of 87 chinook, 390,525 sockeye, 28,969 coho, 4,008,498 pink, and 244,880 chum salmon (Appendix D.22). The sockeye salmon harvest was above the most recent 10-year average, while chinook, pink, coho, and chum salmon harvests were below the most recent 10-year average. The South Central, Southwestern, and Unimak districts were closed from August 24 through August 31 to allow additional escapement and because of poor product quality and limited markets. Beginning September 1, the fall fishing season began in the South Central, Southwestern, and Unimak districts, but effort and harvests were limited to Thin Point Cove in the Southwestern District where 162 sockeye, 2,352 coho, and 87 chum salmon were harvested (Appendix D.23).

Salmon Escapements

Introduction

There are approximately 185 salmon spawning systems in the South Peninsula area, with sockeye salmon found in 23, pink salmon in at least 110, and chum salmon in 72; coho salmon have been documented in 57 stream systems (Murphy 1992). Most salmon escapements are monitored by aerial observations using small fixed-wing aircraft. The coho salmon escapement is estimated in only in a few systems because budget restrictions and adverse weather conditions limit late season aerial survey opportunities. The Orzinski Lake system is monitored with a fish weir operated by ADF&G employees; foot surveys may also be conducted in certain areas. Salmon escapements,

except for the sockeye salmon systems of Orzinski Lake, Thin Point Lake, Mortensen's Lagoon, and Middle Lagoon (where Estimated Total Escapement are used) are estimated using an indexed total escapement method (Appendix E.1).

The United States Fish and Wildlife Service (USFWS) operated a weir at Orzinski (Orzenoi) Lake from 1929 through 1941 (Appendix E.2). In 1990, ADF&G reinstated the weir because of the importance of Orzinski Lake sockeye salmon in determining fishing time for the Northwest Stepovak Section, concerns regarding potential harvests of Chignik Lakes system bound sockeye salmon, the difficulties involved with estimating fish from the air, and the pressure to survey Orzinski Lake during marginal flying conditions. The department has operated the Orzinski Lake weir annually since 1990. Thin Point Lake was first successfully weired in 1994 and was operated through the 1998 season.

Alaska salmon production was low during the 1960s and early 1970s. The Alaska salmon runs began to rebuild in the mid 1970s and most Alaska Peninsula salmon escapements recovered by 1977. Therefore, the 1962-76 and 1977-98 time periods will be used to better represent average historical escapements. From 1962 through 1976, the South Peninsula total indexed salmon escapement averaged 1,280,100 fish composed of 27,813 sockeye, 957,887 pink, and 294,400 chum salmon (Appendix E.3). From 1977 through 1998, the South Peninsula total indexed salmon escapement averaged 3,472,414 salmon composed of 75,129 sockeye, 2,866,344 pink, and 530,951 chum salmon. There are no chinook salmon spawning streams along the South Peninsula waters and coho salmon escapement data are not collected annually for most of the area.

Escapement by Species

Sockeye. The 1999 South Peninsula total indexed sockeye salmon escapement of 96,800 fish was slightly below the most recent 10-year average of 100,844, but within the escapement goal range of 67,800 to 135,000 fish (Appendix E.4). From 1977 through 1999, the sockeye salmon indexed escapement ranged from a low of 39,200 in 1982 to a high of 129,110 in 1995.

Orzinski Lake, Thin Point Lake and Middle Lagoon are the primary sockeye salmon producers in the South Peninsula. In 1999, ADF&G personnel installed a fish weir at Orzinski Lake to enumerate salmon escapements. Orzinski Lake is located in the Southeastern District and had a sockeye salmon escapement of 15,000, which met the lower end of the 15,000-20,000 escapement goal range (Appendix E.5). Thin Point Lake in the Southwestern District had a sockeye salmon escapement of 20,500 which was at the lower end of the 20,000 to 30,000 escapement goal range. Middle Lagoon, also located in the Southwestern District, had an estimated sockeye salmon escapement of 24,600 and was within the 16,000 to 32,000 fish escapement range.

Coho. The 1999 South Peninsula coho salmon indexed escapement was not calculated due to limited survey data. The most complete coho salmon escapement survey occurred in 1990, and the indexed coho salmon escapement was 87,500 (Appendix E.3). During 1994 through 1999, Thin Point Lake was the only major area surveyed for coho salmon. The highest coho aerial survey counts (not necessarily the peak counts) were about 13,000 in 1994 and 1995. In 1999, the Thin Point Lake peak coho aerial survey count was 5,000 salmon which is near the midpoint of the

escapement goal. The Thin Point Lake coho escapement goal is 3,000 to 6,000 salmon based on historical aerial survey data.

Pink. The 1999 South Peninsula total indexed pink salmon escapement of 5,015,310 was the third highest on record and exceeded the upper end of the odd year escapement goal range of 1,600,000 to 3,180,000 fish (Appendix E.3. and E.6). From 1977 through 1998, the pink salmon indexed escapement ranged from 851,200 in 1983 to 6,406,300 in 1995 and averaged 2,866,344 fish. From 1989 through 1998, the South Peninsula total pink salmon indexed escapement averaged 3,527,756 fish.

Chum. The 1999 South Peninsula total indexed chum salmon escapement of 725,000 was the fourth largest escapement on record and exceeded the upper escapement goal range of 350,000 to 690,000 fish (Appendix E.3. and E.7). From 1977 through 1998, the chum salmon indexed escapement ranged from 310,500 in 1989 to 809,050 in 1997 and averaged 530,951 salmon. From 1989 through 1998, the chum salmon indexed escapement averaged 545,242 fish.

Escapement by District

The 1999 Southeastern District indexed total escapement was composed of 19,280 sockeye, 1,551,880 pink, and 82,550 chum salmon (Appendix E.8; coho salmon data are not available). The pink salmon escapement was well above the upper odd year escapement goal of 1,025,000 fish, but the chum salmon escapement was below the lower escapement goal of 112,600. The sockeye escapement was above the lower goal for the Southeastern District of 16,200 fish.

The 1999 South Central District indexed escapement was 15,300 sockeye, 1,811,200 pink, and 253,500 chum salmon (Appendix E.8). Sockeye, pink, and chum salmon escapements exceeded their upper end escapement goals of 6,400, 1,400,000, and 200,000 fish respectively. The department has not established indexed escapement goals for coho salmon in the South Central District.

The 1999 Southwestern District indexed escapement was 56,220 sockeye, 1,622,230 pink, and 338,130 chum salmon (Appendix E.8). Pink and chum salmon escapements exceeded their upper escapement goals of 734,000 and 272,000 fish, respectively. The sockeye salmon escapement was above the lower goal of 38,000 but below the upper goal of 75,000. The department has not established indexed escapement goals for coho salmon in the Southwestern District.

The 1999 Unimak District indexed escapement was 6,000 sockeye, 30,000 pink, and 1,000 chum salmon (Appendix E.8). Sockeye and pink salmon point escapement goals are 6,000 and 12,500 fish, respectively. The department has not established indexed escapement goals for coho or chum salmon in the Unimak District.

A separate report summarizes the Alaska Peninsula Management Area escapement and catch-sampling program, which annually samples salmon catch and escapement for biological characteristics (age, length, and sex: Bouwens et al. *In Press*). Also, annual salmon management plans provide overviews of the Alaska Peninsula, Aleutian Islands (Shaul and Dinnocenzo 1999a), and Atka-Amlia Management Areas (Shaul and Dinnocenzo 1999b), and the North Alaska Peninsula (Murphy et al. 1998) commercial, subsistence, and personal use salmon fisheries.

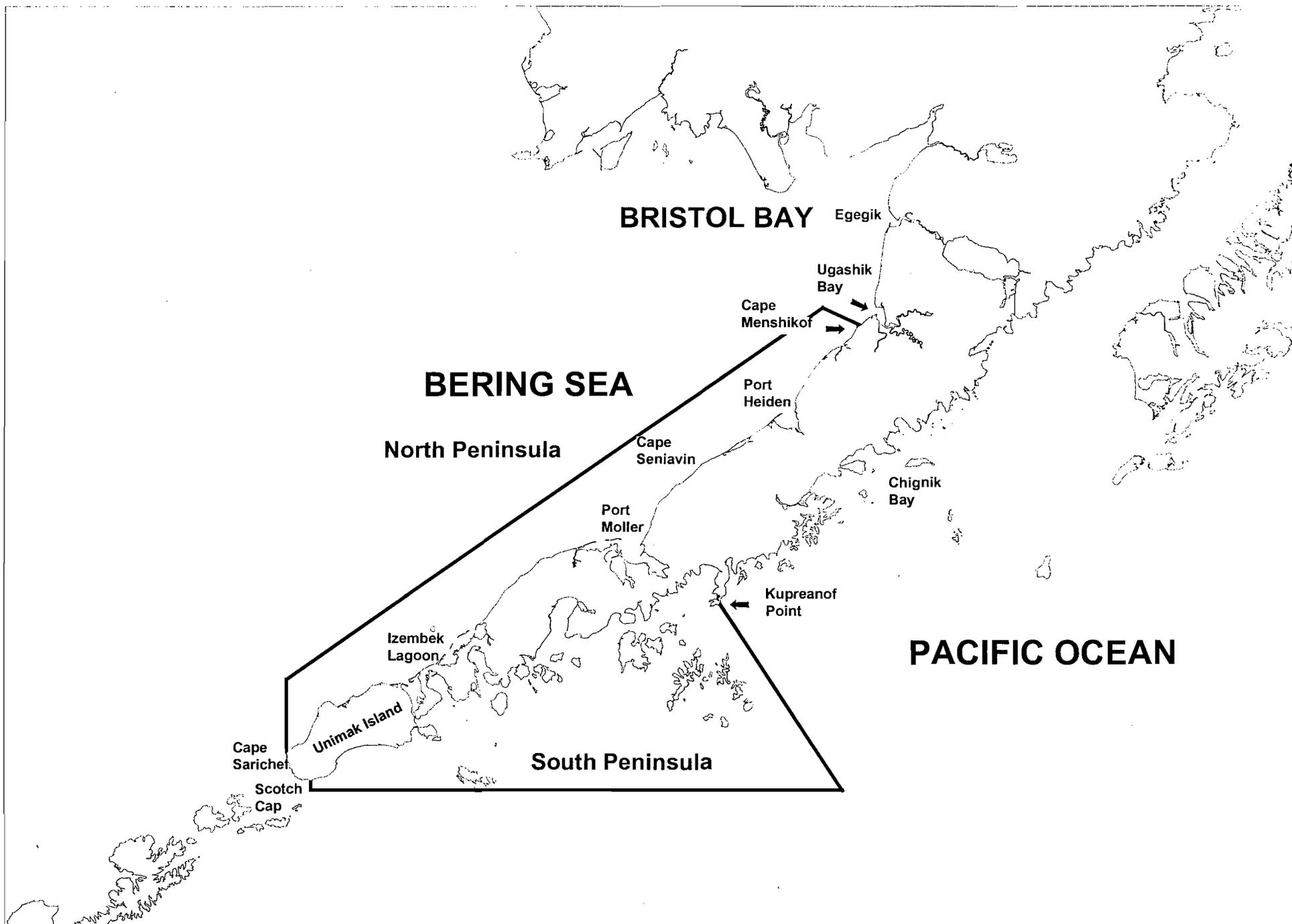
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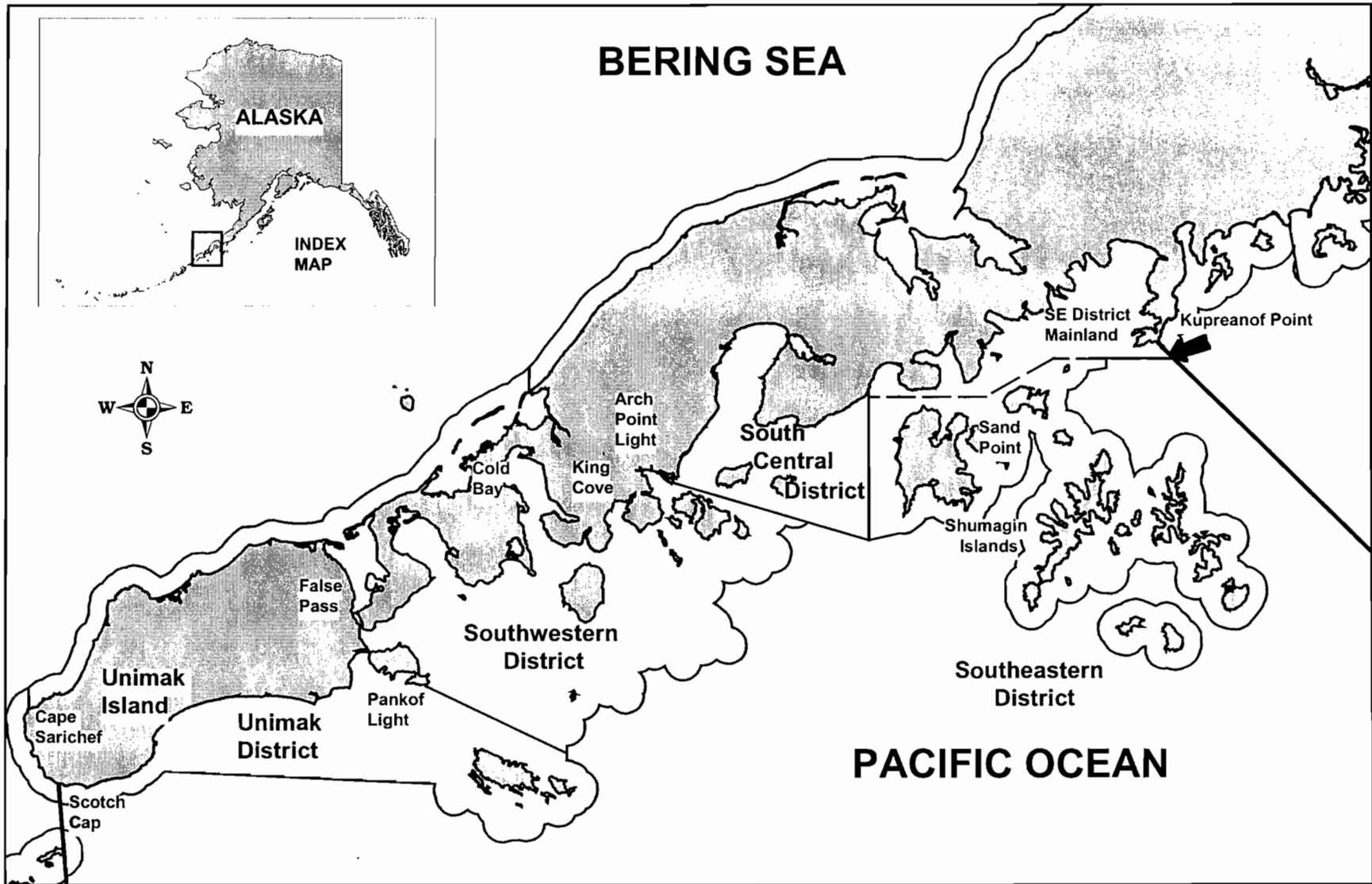
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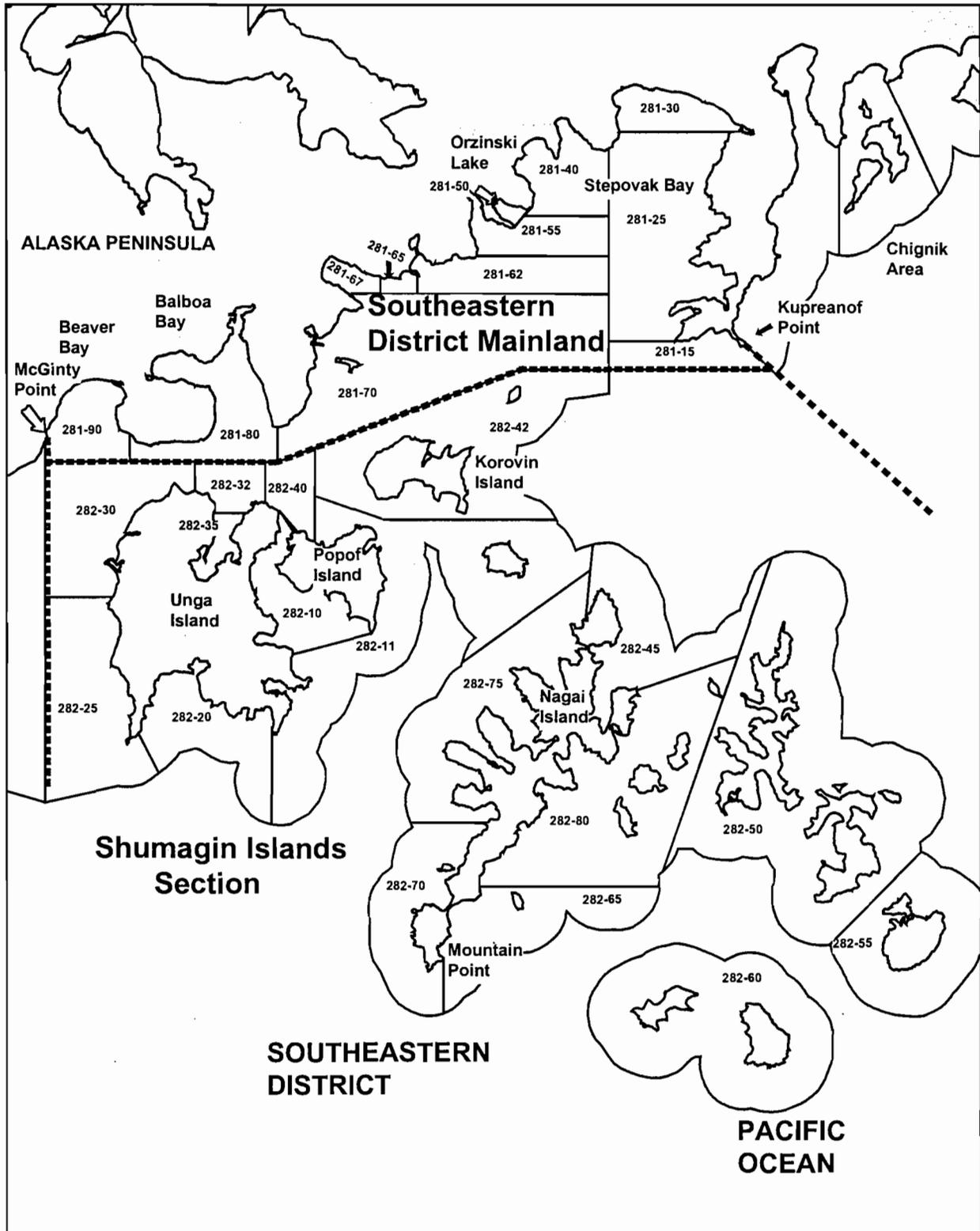
APPENDIX



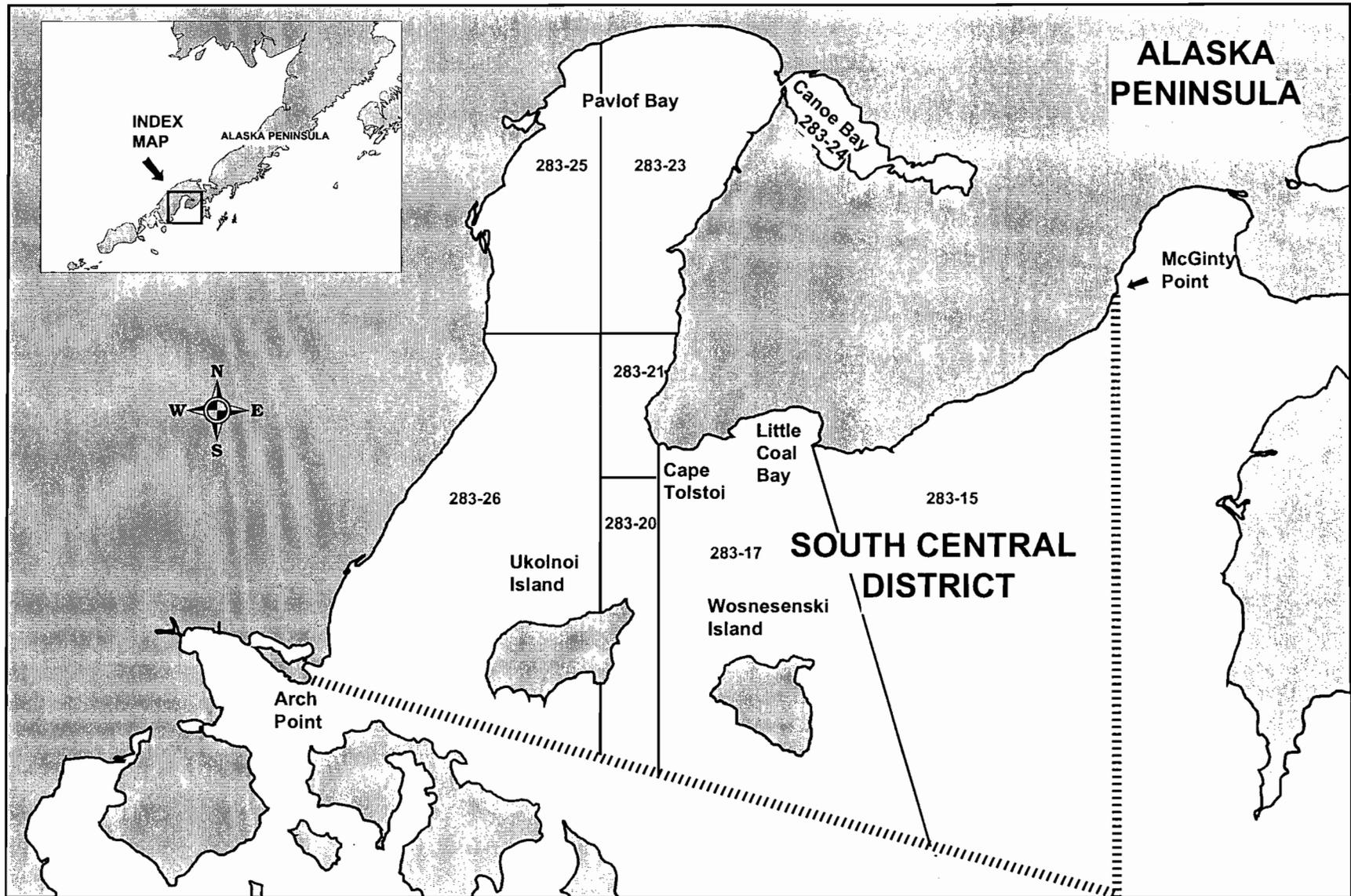
Appendix A.1. Map of the Alaska Peninsula Management Area, with the North and South Peninsula defined.



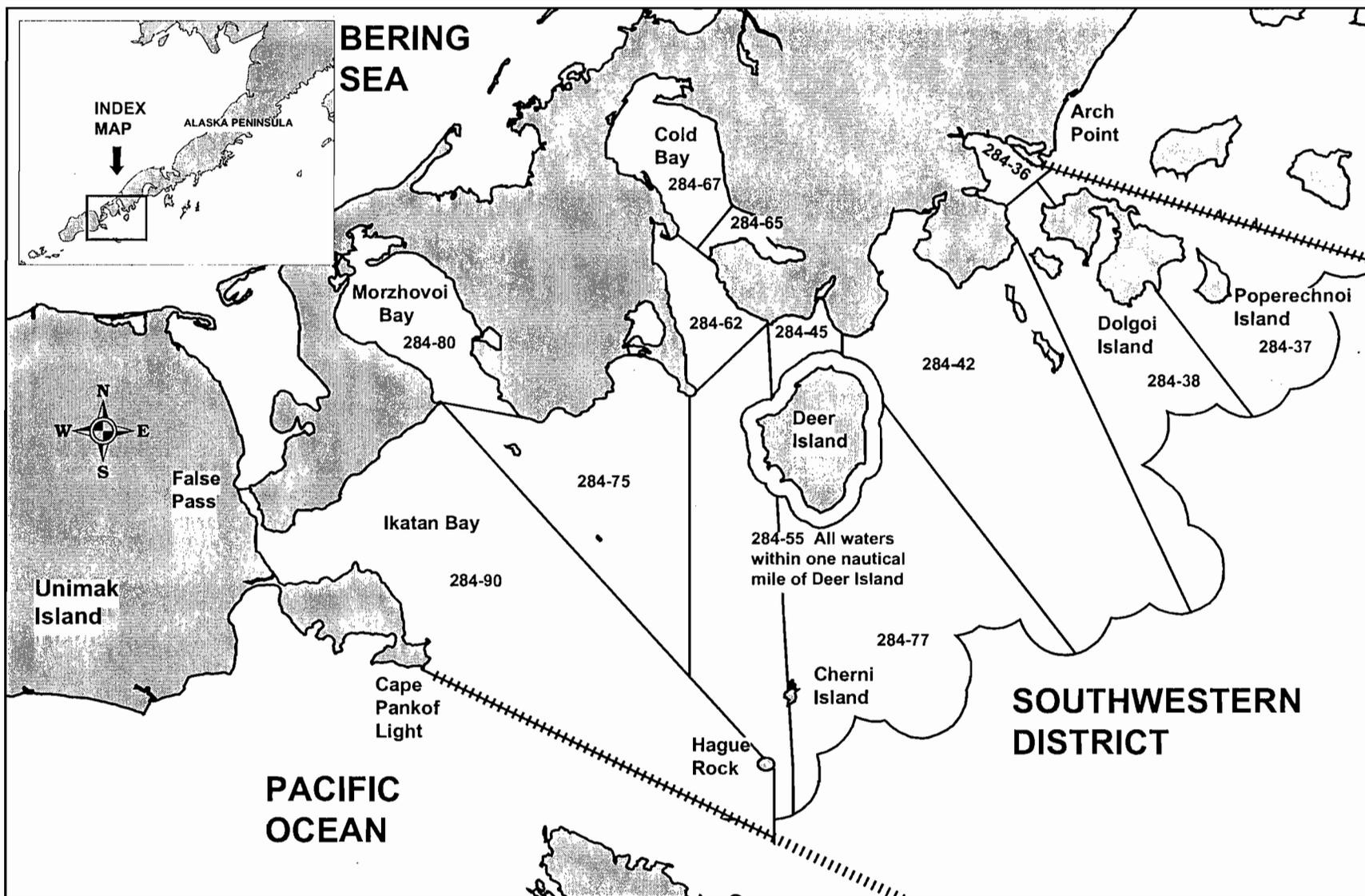
Appendix A.2. Map of the Alaska Peninsula Management Area from Kupreanof Point to Scotch Cap with the South Peninsula salmon fishing districts defined.



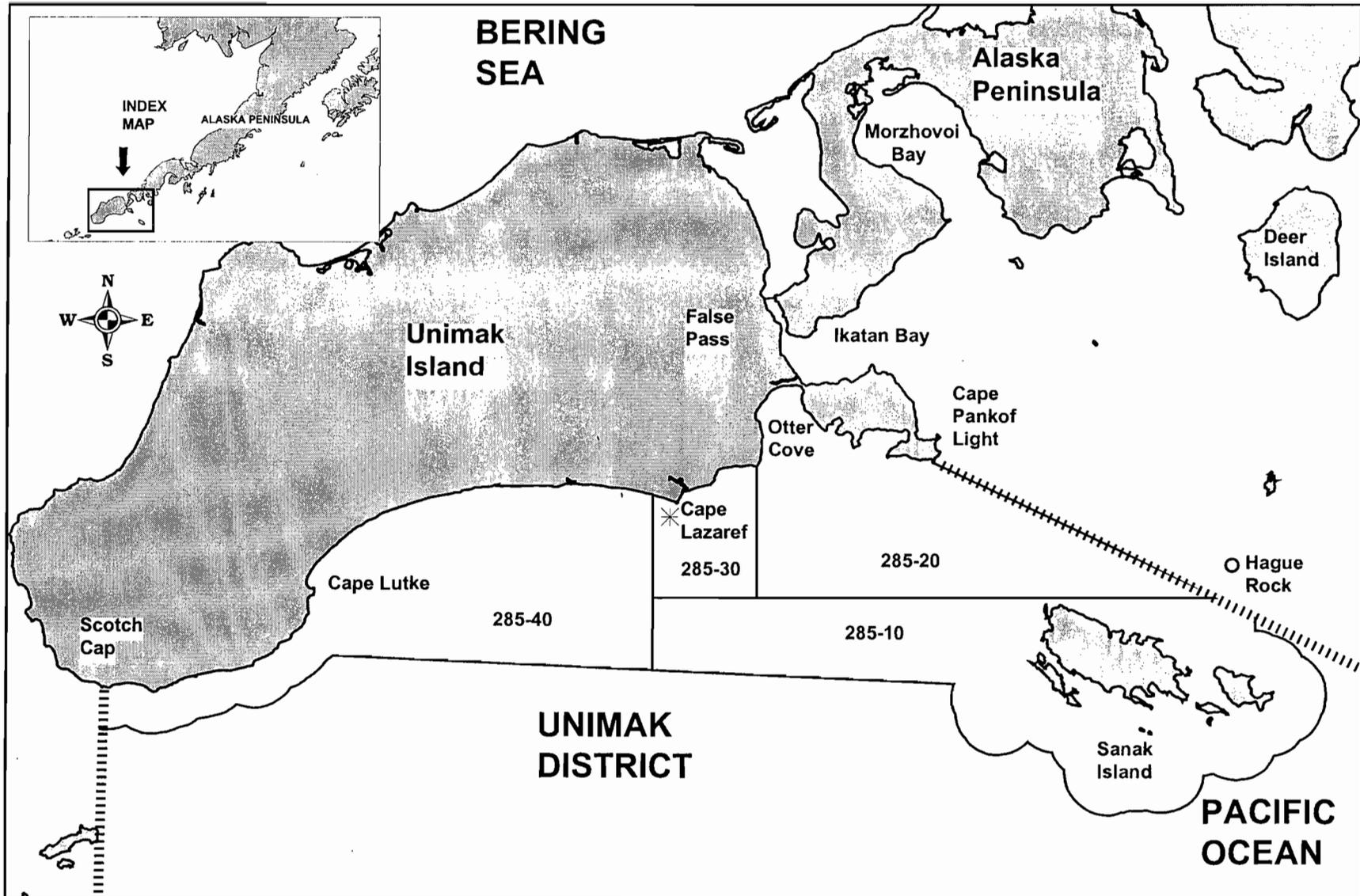
Appendix A.3. Map of the Alaska Peninsula Area from Kupreanof Point to McGinty Point (Southeastern District) with the statistical salmon fishing areas shown.



Appendix A.4. Map of the Alaska Peninsula Area from McGinty Point to Arch Point (South Central District) with the statistical salmon fishing areas shown.



Appendix A.5. Map of the Alaska Peninsula Area from Arch Point to Unimak Island (Southwestern District) with the statistical salmon fishing areas shown.

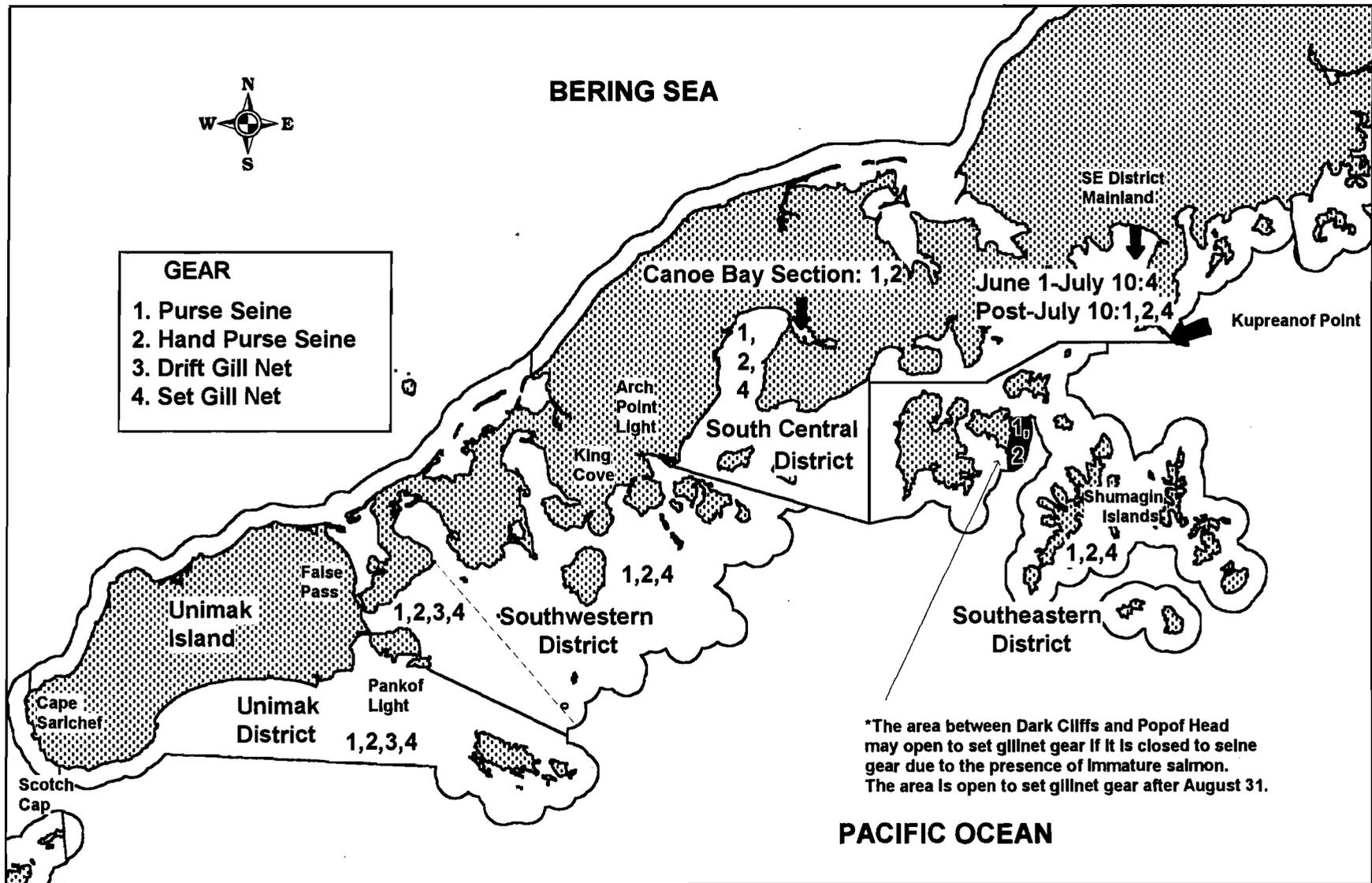


Appendix A.6. Map of the Alaska Peninsula Area from Hague Rock to Unimak Pass (Unimak District) with the statistical salmon fishing areas shown.

Appendix A.7. Number of limited entry permits and fishing effort in the South Peninsula, 1970-99.

Year	Purse Seine		Drift Gillnet		Set Gillnet	
	Permits Available	Permits Fished	Permits Available	Permits Fished	Permits Available	Permits Fished
1970	125	108	165	157	114	30
1971	125	113	165	122	114	24
1972	125	90	165	151	114	25
1973	125	55	165	121	114	26
1974	125	46	165	46	114	42
1975	125	52	165	81	114	12
1976	125	89	165	108	114	24
1977	125	84	165	101	114	26
1978	125	101	165	120	114	30
1979	125	123	165	137	114	46
1980	125	114	165	129	114	45
1981	125	116	165	135	114	53
1982	125	115	165	138	114	52
1983	125	118	165	147	114	59
1984	125	121	165	147	114	66
1985	125	122	165	150	114	64
1986	125	119	165	156	114	60
1987	125	113	165	145	114	69
1988	125	112	165	148	114	70
1989	125	117	165	147	114	76
1990	126	118	164	154	114	81
1991	126	119	164	157	114	78
1992	125	119	164	142	114	79
1993	125	123	164	144	114	86
1994	125	118	164	145	114	79
1995	125	118	164	151	114	82
1996	124	102	164	147	114	82
1997	122	82	164	142	114	82
1998	122	79	164	145	115	86
1999	121	74	164	153	115	82
1979-98 Average						
	125	113	165	145	114	70
1989-98 Average						
	125	110	164	147	114	81

Note: Number of permits include permanent permits and interim use permits.
Permits fished include those permit holders making at least one delivery during the year.



Appendix A.8. Map of the Alaska Peninsula Management Area from Kupreanof Point to Scotch Cap with the legal gear types by district shown.

Appendix A.9. South Peninsula salmon catch and escapement by species and year,
1962-99.^a

Year		Chinook	Sockeye	Coho ^b	Pink	Chum
1962	Catch	3,300	420,000	12,500	1,965,400	824,800
	Escapement	0	18,800	-	1,598,800	399,400
	Total	3,300	438,800	-	3,564,200	1,224,200
1963	Catch	1,900	204,400	16,500	2,367,700	461,300
	Escapement	0	23,000	-	1,317,900	446,700
	Total	1,900	227,400	-	3,685,600	908,000
1964	Catch	2,000	370,800	13,600	2,740,300	751,000
	Escapement	0	15,700	-	1,436,400	454,800
	Total	2,000	386,500	-	4,176,700	1,205,800
1965	Catch	2,100	915,700	34,200	2,884,100	556,400
	Escapement	0	12,100	-	1,035,400	228,000
	Total	2,100	927,800	-	3,919,500	784,400
1966	Catch	1,400	606,200	6,300	305,800	494,400
	Escapement	0	17,000	-	719,400	422,000
	Total	1,400	623,200	-	1,025,200	916,400
1967	Catch	1,600	294,100	2,900	78,300	245,200
	Escapement	0	16,200	-	445,500	182,900
	Total	1,600	310,300	-	523,800	428,100
1968	Catch	1,400	699,800	31,100	1,287,100	325,300
	Escapement	0	12,800	-	823,300	279,100
	Total	1,400	712,600	-	2,110,400	604,400
1969	Catch	1,900	912,800	10,900	1,219,100	389,200
	Escapement	0	29,500	-	2,474,900	134,600
	Total	1,900	942,300	-	3,694,000	523,800
1970	Catch	1,806	1,799,525	32,571	1,737,985	993,349
	Escapement	0	16,500	-	1,298,900	280,500
	Total	1,806	1,816,025	-	3,036,885	1,273,849
1971	Catch	2,174	716,087	16,907	1,445,031	1,365,957
	Escapement	0	19,400	-	702,700	343,200
	Total	2,174	735,487	-	2,147,731	1,709,157
1972	Catch	1,332	557,422	8,021	78,221	731,814
	Escapement	0	11,900	-	111,400	254,500
	Total	1,332	569,322	-	189,621	986,314

-Continued-

Appendix A.9. (page 2 of 4)

Year		Chinook	Sockeye	Coho	Pink	Chum
1973	Catch	415	330,091	6,599	58,051	292,943
	Escapement	0	7,300	-	110,800	212,500
	Total	415	337,391	-	168,851	505,443
1974	Catch	581	197,153	9,366	100,601	71,826
	Escapement	0	95,600	-	284,400	257,300
	Total	581	292,753	-	385,001	329,126
1975	Catch	117	243,548	67	60,642	130,750
	Escapement	0	51,700	-	552,100	193,300
	Total	117	295,248	-	612,742	324,050
1976	Catch	2,196	375,027	216	2,366,833	532,503
	Escapement	0	69,700	-	1,456,400	327,200
	Total	2,196	444,727	-	3,823,233	859,703
1977	Catch	559	311,722	2,108	1,448,648	243,167
	Escapement	0	64,900	-	2,677,800	774,900
	Total	559	376,622	-	4,126,448	1,018,067
1978	Catch	773	579,411	60,774	5,590,145	546,182
	Escapement	0	64,800	-	2,858,700	600,500
	Total	773	644,211	-	8,348,845	1,146,682
1979	Catch	2,141	1,149,927	356,867	6,564,914	482,930
	Escapement	0	53,300	-	2,629,500	411,100
	Total	2,141	1,203,227	-	9,194,414	894,030
1980	Catch	4,794	3,613,025	274,181	7,861,470	1,353,112
	Escapement	0	45,900	-	2,641,600	362,400
	Total	4,794	3,658,925	-	10,502,070	1,713,512
1981	Catch	11,182	2,241,513	162,223	5,033,028	1,768,475
	Escapement	0	45,700	-	2,307,500	381,300
	Total	11,182	2,287,213	-	7,340,528	2,149,775
1982	Catch	9,845	2,345,981	256,046	6,734,905	2,272,495
	Escapement	0	39,200	-	2,293,000	386,900
	Total	9,845	2,385,181	-	9,027,905	2,659,395
1983	Catch	26,571	2,556,557	127,657	2,827,622	1,704,072
	Escapement	0	59,200	-	851,200	446,500
	Total	26,571	2,615,757	-	3,678,822	2,150,572

-Continued-

Appendix A.9. (page 3 of 4)

Year		Chinook	Sockeye	Coho	Pink	Chum
1984	Catch	9,198	2,318,028	310,950	11,589,258	1,654,622
	Escapement	0	54,800	-	3,811,600	699,700
	Total	9,198	2,372,828	-	15,400,858	2,354,322
1985	Catch	6,642	2,144,416	172,514	4,431,016	1,348,726
	Escapement	0	49,900	-	1,614,100	503,400
	Total	6,642	2,194,316	-	6,045,116	1,852,126
1986	Catch	5,589	1,223,089	235,854	4,031,487	1,749,651
	Escapement	0	48,000	-	1,716,700	544,500
	Total	5,589	1,271,089	-	5,748,187	2,294,226
1987	Catch	9,174	1,449,753	225,120	1,208,556	1,376,887
	Escapement	0	44,600	-	1,540,500	620,700
	Total	9,174	1,494,353	-	2,749,056	1,997,587
1988	Catch	11,075	1,473,651	505,533	7,044,824	1,908,507
	Escapement	0	74,100	-	2,839,600	496,400
	Total	11,075	1,547,751	-	9,884,424	2,404,907
1989	Catch	7,065	2,660,800	443,843	7,292,658	994,231
	Escapement	0	78,100	-	1,870,900	310,500
	Total	7,065	2,738,900	-	9,163,558	1,304,731
1990	Catch	16,522	2,386,844	307,218	2,865,856	1,237,826
	Escapement	0	95,300	(75.0-100.0) ^c	1,598,400	354,700
	Total	16,522	2,482,144	367.2-397.2 ^c	4,464,256	1,592,526
1991	Catch	7,975	2,319,942	317,129	10,616,756	1,588,795
	Escapement	0	124,900	-	2,946,800	587,600
	Total	7,975	2,444,842	-	13,563,556	2,176,395
1992	Catch	8,026	3,445,914	418,232	9,770,386	1,316,709
	Escapement	0	97,600	-	2,834,400	335,500
	Total	8,026	3,543,514	-	12,604,786	1,652,209
1993	Catch	14,413	3,689,074	220,148	9,928,107	1,048,257
	Escapement	0	100,341	-	2,990,140	397,030
	Total	14,413	3,789,415	-	12,918,247	1,445,287
1994	Catch	10,002	2,107,233	255,905	9,179,853	2,192,079
	Escapement	0	120,255	-	3,071,725	579,100
	Total	10,002	2,227,488	-	12,251,578	2,771,179
1995	Catch	17,078	2,996,353	260,686	16,302,593	1,715,067
	Escapement	0	129,110	-	6,406,300	726,400
	Total	17,078	3,125,463	-	22,708,893	2,441,467
1996	Catch	5,526	1,543,691	293,374	2,205,094	793,679
	Escapement	0	72,950	-	3,647,550	610,300
	Total	5,526	1,616,641	-	5,852,644	1,403,979

-Continued-

Appendix A.9. (page 4 of 4)

Year	Chinook	Sockeye	Coho	Pink	Chum
1997 Catch	7,780	2,281,566	116,136	2,321,371	627,996
Escapement	0	104,440	-	5,143,275	809,050
Total	7,780	2,386,006	-	7,464,646	1,437,046
1998 Catch	4,919	2,183,195	154,194	8,047,998	721,068
Escapement	0	85,440	-	4,668,065	742,235
Total	4,919	2,268,635	-	12,716,063	1,463,303
1999 Catch	5,074	2,991,819	192,503	8,456,449	840,030
Escapement	0	96,800	-	5,015,310	725,180
Total	5,074	3,088,619	-	13,471,759	1,565,210

^a Salmon numbers include commercial and test fish harvests, but exclude subsistence harvests.

^b Coho salmon escapement is not normally calculated due to the severe weather conditions in the fall, timing of coho in the area, and budgetary limitations.

^c Escapements are indexed totals and the figures in parenthesis are rough extrapolated estimates.

Appendix A.10. South Peninsula pink salmon catch and escapement by year, 1962-99.^a

Year		Not including June Migrants			June Migrants		Total June Migrants
		Southeastern and South Central Districts	Southwestern and Unimak Districts	South Peninsula Totals	South Unimak	Shumagin Islands	
1962	Catch	922,100	977,300	1,899,400	42,000	24,000	66,000
	Escapement	826,100	772,700	1,598,800			
	Total	1,748,200	1,750,000	3,498,200			
1963	Catch	1,733,900	590,800	2,324,700	14,000	29,000	43,000
	Escapement	886,500	431,400	1,317,900			
	Total	2,620,400	1,022,200	3,642,200			
1964	Catch	1,514,600	1,190,700	2,705,300	18,000	17,000	35,000
	Escapement	902,400	534,000	1,436,400			
	Total	2,417,000	1,724,700	4,141,700			
1965	Catch	2,331,400	474,700	2,806,100	43,000	35,000	78,000
	Escapement	789,900	245,500	1,035,400			
	Total	3,121,300	720,200	3,841,500			
1966	Catch	220,300	68,500	288,800	15,000	2,000	17,000
	Escapement	627,400	92,000	719,400			
	Total	847,700	160,500	1,008,200			
1967	Catch	53,100	4,200	57,300	11,000	10,000	21,000
	Escapement	327,300	118,200	445,500			
	Total	380,400	122,400	502,800			
1968	Catch	863,300	277,800	1,141,100	34,000	112,000	146,000
	Escapement	528,100	295,200	823,300			
	Total	1,391,400	573,000	1,964,400			
1969	Catch	862,800	265,300	1,128,100	68,000	23,000	91,000
	Escapement	1,906,200	568,700	2,474,900			
	Total	2,769,000	834,000	3,603,000			
1970	Catch	1,378,374	252,030	1,630,404	87,717	19,725	107,442
	Escapement	1,007,900	291,000	1,298,900			
	Total	2,386,274	543,030	2,929,304			
1971	Catch	1,211,943	211,585	1,423,528	11,608	7,632	19,240
	Escapement	488,000	214,700	702,700			
	Total	1,699,943	426,285	2,126,228			

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Appendix A.10. (page 2 of 4)

Year		Not including June Migrants			June Migrants		Total June Migrants
		Southeastern and South Central Districts	Southwestern and Unimak Districts	South Peninsula Totals	South Unimak	Shumagin Islands	
1972	Catch	53,312	6,958	60,270	11,906	6,018	17,924
	Escapement	81,800	29,600	111,400			
	Total	135,112	36,558	171,670			
1973	Catch	36,427	2,073	38,500	11,152	8,278	19,430
	Escapement	85,700	25,100	110,800			
	Total	122,127	27,173	149,300			
1974	Catch	95,529	4,650	100,179	0	0	0
	Escapement	238,600	45,800	284,400			
	Total	334,129	50,450	384,579			
1975	Catch	30,052	25,343	55,395	3,205	2,042	5,247
	Escapement	357,800	194,300	552,100			
	Total	387,852	219,643	607,495			
1976	Catch	2,035,814	306,786	2,342,600	18,259	5,643	23,902
	Escapement	1,084,000	372,400	1,456,400			
	Total	3,119,814	679,186	3,799,000			
1977	Catch	1,163,500	279,745	1,443,245	3,397	2,001	5,398
	Escapement	2,168,500	509,300	2,677,800			
	Total	3,332,000	789,045	4,121,045			
1978	Catch	4,167,852	1,332,325	5,500,177	47,380	42,562	89,942
	Escapement	1,966,300	892,400	2,858,700			
	Total	6,134,152	2,224,725	8,358,877			
1979	Catch	4,839,031	1,570,553	6,409,584	49,000	105,813	154,813
	Escapement	2,125,100	504,400	2,629,500			
	Total	6,964,131	2,074,953	9,039,084			
1980	Catch	3,732,127	2,603,032	6,335,159	1,140,611	385,695	1,526,306
	Escapement	1,410,400	1,231,200	2,641,600			
	Total	5,142,527	3,834,232	8,976,759			
1981	Catch	3,950,473	631,170	4,581,643	325,004	126,248	451,252
	Escapement	1,875,000	431,800	2,306,800			
	Total	5,825,473	1,062,970	6,888,443			

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Year		Not including June Migrants			June Migrants		Total June Migrants
		Southeastern and South Central Districts	Southwestern and Unimak Districts	South Peninsula Totals	South Unimak	Shumagin Islands	
1982	Catch	4,104,934	911,131	5,016,065	1,032,154	681,214	1,713,368
	Escapement	1,533,200	759,800	2,293,000			
	Total	5,638,134	1,670,931	7,309,065			
1983	Catch	2,245,429	526,315	2,771,744	40,441	15,434	55,875
	Escapement	639,200	212,000	851,200			
	Total	2,884,629	738,315	3,622,944			
1984	Catch	6,532,654	4,136,235	10,668,889	470,688	449,188	919,876
	Escapement	2,526,700	1,824,900	3,811,600			
	Total	8,519,354	5,961,135	14,480,489			
1985	Catch	3,323,535	1,000,350	4,323,885	69,811	36,804	106,615
	Escapement	1,229,300	384,500	1,614,100			
	Total	4,553,135	1,384,850	5,937,985			
1986	Catch	3,066,556	672,867	3,739,423	150,674	141,315	291,989
	Escapement	1,185,500	531,200	1,716,700			
	Total	4,252,056	1,204,067	5,456,123			
1987	Catch	1,143,374	48,138	1,191,512	11,342	5,640	16,982
	Escapement	1,304,400	236,100	1,540,500			
	Total	2,447,774	284,238	2,732,012			
1988	Catch	4,700,486	2,164,114	6,864,600	86,678	93,546	180,224
	Escapement	1,636,500	1,203,100	2,839,600			
	Total	6,336,986	3,367,214	9,704,200			
1989	Catch	5,582,274	1,507,621	7,089,895	154,168	45,067	199,235
	Escapement	1,179,300	691,600	1,870,900			
	Total	6,761,574	2,199,221	8,960,795			
1990	Catch	1,738,743	607,300	2,346,043	444,442	70,798	515,240
	Escapement	1,018,200	580,200	1,598,400			
	Total	2,756,943	1,187,500	3,944,443			
1991	Catch	7,549,853	2,427,570	9,977,423	500,922	118,215	619,137
	Escapement	2,268,400	678,400	2,946,800			
	Total	9,818,253	3,105,970	12,924,223			

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Appendix A.10. (page 4 of 4)

Year		Not including June Migrants			June Migrants		Total June Migrants
		Southeastern and South Central Districts	Southwestern and Unimak Districts	South Peninsula Totals	South Unimak	Shumagin Islands	
1992	Catch	4,860,628	4,256,851	9,117,479	501,127	140,963	642,090
	Escapement	1,781,000	1,053,400	2,834,400			
	Total	6,641,628	5,310,251	11,951,879			
1993	Catch	7,493,472	2,353,200	9,843,962	37,735	43,401	81,136
	Escapement	2,232,200	757,900	2,990,140			
	Total	9,725,712	3,111,100	12,834,102			
1994	Catch	3,149,763	3,501,426	6,651,189	1,731,741	760,773	2,492,514
	Escapement	1,700,525	1,371,200	3,073,225			
	Total	4,850,288	4,872,626	9,724,414			
1995	Catch	11,362,914	4,761,044	16,123,958	119,094	59,541	178,635
	Escapement	4,404,450	2,001,850	6,406,300			
	Total	15,767,364	6,762,894	22,530,258			
1996	Catch	1,513,954	306,881	1,820,835	146,799	230,885	377,684
	Escapement	2,668,950	978,600	3,647,550			
	Total	4,182,904	1,285,481	5,468,385			
1997	Catch	839,656	869,597	1,709,253	336,238	275,880	612,118
	Escapement	4,021,375	1,221,900	5,243,275			
	Total	4,861,031	2,091,497	6,952,528			
1998	Catch	5,565,639	2,000,702	7,566,341	125,906	348,434	474,340
	Escapement	2,856,255	1,811,810	4,668,065			
	Total	8,421,894	3,812,512	12,234,406			
1999	Catch	6,902,382	1,510,422	8,412,804	20,302	10,237	30,539
	Escapement	3,363,080	1,652,230	5,015,310			
	Total	10,265,462	3,162,652	13,428,114			

^a Salmon numbers exclude test fish and subsistence harvests.

Appendix A.11. South Peninsula chum salmon catch and escapement by year, 1962-99.^a

Year		Not including June Migrants			June Migrants		Total June Migrants
		Southeastern and South Central Districts	Southwestern and Unimak Districts	South Peninsula Totals	South Unimak	Shumagin Islands	
1962	Catch	409,500	155,300	564,800	199,000	61,000	260,000
	Escapement	238,600	160,800	399,400			
	Total	648,100	316,100	964,200			
1963	Catch	278,000	80,300	358,300	67,000	36,000	103,000
	Escapement	263,000	183,700	446,700			
	Total	541,000	264,000	805,000			
1964	Catch	378,800	153,300	532,100	153,000	67,000	220,000
	Escapement	160,800	294,000	454,800			
	Total	539,600	447,300	986,900			
1965	Catch	221,700	150,700	372,400	139,000	45,000	184,000
	Escapement	203,300	24,200	228,000			
	Total	425,000	175,400	600,400			
1966	Catch	221,400	36,000	257,400	220,000	17,000	237,000
	Escapement	354,800	67,200	422,000			
	Total	576,800	103,200	679,400			
1967	Catch	118,700	4,500	123,200	71,000	51,000	122,000
	Escapement	132,800	50,100	182,900			
	Total	251,500	54,600	306,100			
1968	Catch	121,400	47,600	169,000	105,000	51,000	156,000
	Escapement	191,700	87,400	279,100			
	Total	313,100	135,000	448,100			
1969	Catch	95,100	43,300	138,400	238,000	13,000	251,000
	Escapement	96,900	37,700	134,600			
	Total	192,000	81,000	273,000			
1970	Catch	485,444	65,254	550,698	397,003	44,896	441,899
	Escapement	171,700	108,800	280,500			
	Total	657,144	174,054	831,198			
1971	Catch	646,351	209,565	855,916	405,311	103,886	509,197
	Escapement	199,100	144,100	343,200			
	Total	845,451	353,665	1,199,116			

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Appendix A.11. (page 2 of 4)

Year		Not including June Migrants			June Migrants		Total June Migrants
		Southeastern and South Central Districts	Southwestern and Unimak Districts	South Peninsula Totals	South Unimak	Shumagin Islands	
1972	Catch	150,784	61,721	212,505	411,019	107,810	518,829
	Escapement	145,000	109,500	254,500			
	Total	295,784	171,221	467,005			
1973	Catch	79,369	12,441	91,810	177,720	22,910	200,630
	Escapement	130,900	81,600	212,500			
	Total	210,269	94,041	304,310			
1974	Catch	56,113	15,317	71,430	0	0	0
	Escapement	169,800	87,500	257,300			
	Total	225,913	102,817	328,730			
1975	Catch	29,419	509	29,928	65,279	35,542	100,821
	Escapement	160,200	33,100	193,300			
	Total	189,619	33,609	223,228			
1976	Catch	106,368	14,914	121,282	336,238	74,109	410,347
	Escapement	225,300	101,900	327,200			
	Total	331,668	116,814	448,482			
1977	Catch	109,132	17,630	126,762	94,215	21,899	116,114
	Escapement	500,900	274,000	774,900			
	Total	610,032	291,630	901,662			
1978	Catch	340,319	83,213	423,532	103,429	18,479	121,908
	Escapement	386,200	214,300	600,500			
	Total	726,519	297,513	1,024,032			
1979	Catch	280,286	98,426	378,712	63,153	40,953	104,106
	Escapement	302,700	108,400	411,100			
	Total	582,986	206,826	789,812			
1980	Catch	674,847	169,141	843,988	458,499	50,366	508,865
	Escapement	241,600	120,800	362,400			
	Total	916,447	289,941	1,206,388			
1981	Catch	961,456	239,998	1,201,454	509,911	54,071	563,982
	Escapement	234,500	146,800	381,300			
	Total	1,195,956	386,798	1,582,754			

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Year		Not including June Migrants			June Migrants		Total June Migrants
		Southeastern and South Central Districts	Southwestern and Unimak Districts	South Peninsula Totals	South Unimak	Shumagin Islands	
1982	Catch	915,847	255,661	1,171,508	933,728	164,975	1,098,703
	Escapement	203,000	183,900	386,900			
	Total	1,118,847	439,561	1,558,408			
1983	Catch	596,053	321,145	917,198	616,390	169,277	785,667
	Escapement	328,900	117,600	446,500			
	Total	924,953	438,745	1,363,698			
1984	Catch	827,717	484,630	1,312,347	227,913	109,207	337,120
	Escapement	446,000	253,700	699,700			
	Total	1,273,717	738,330	2,012,047			
1985	Catch	536,748	375,832	912,580	324,825	109,004	433,829
	Escapement	284,700	218,800	503,500			
	Total	821,448	594,632	1,416,080			
1986	Catch	977,635	416,697	1,394,332	252,721	99,148	351,769
	Escapement	239,600	305,000	544,600			
	Total	1,217,235	721,697	1,938,932			
1987	Catch	750,282	179,500	929,782	406,077	37,064	443,141
	Escapement	329,200	291,500	620,700			
	Total	1,079,482	471,000	1,550,482			
1988	Catch	829,518	552,278	1,381,796	464,765	61,946	526,711
	Escapement	269,100	227,300	496,400			
	Total	1,098,618	779,578	1,878,196			
1989	Catch	421,254	116,923	538,177	407,635	47,528	455,163
	Escapement	189,200	121,300	310,500			
	Total	610,454	238,223	848,677			
1990	Catch	563,642	152,298	715,940	455,238	63,501	518,739
	Escapement	210,900	143,800	354,700			
	Total	774,542	296,098	1,070,640			
1991	Catch	571,802	226,088	797,890	670,409	102,602	773,011
	Escapement	345,400	242,200	587,600			
	Total	917,202	468,288	1,385,490			

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Appendix A.11. (page 4 of 4)

Year		Not including June Migrants			June Migrants		Total June Migrants
		Southeastern and South Central Districts	Southwestern and Unimak Districts	South Peninsula Totals	South Unimak	Shumagin Islands	
1992	Catch	592,893	287,173	880,066	323,891	102,312	426,203
	Escapement	194,100	141,400	335,500			
	Total	786,993	428,573	1,215,566			
1993	Catch	331,003	182,576	513,579	381,941	150,306	532,247
	Escapement	172,400	224,630	397,030			
	Total	503,403	407,206	910,609			
1994	Catch	690,666	902,924	1,593,590	374,409	207,756	582,165
	Escapement	211,700	367,400	579,100			
	Total	902,366	1,270,324	2,172,690			
1995	Catch	666,344	511,290	1,177,634	342,307	195,126	537,433
	Escapement	324,750	401,650	726,400			
	Total	991,094	912,940	1,904,034			
1996	Catch	287,930	128,126	416,056	129,889	229,931	359,820
	Escapement	307,400	302,900	610,300			
	Total	595,330	431,026	1,026,356			
1997	Catch	106,622	182,559	289,181	206,698	132,117	338,815
	Escapement	542,050	267,000	809,050			
	Total	648,672	449,559	1,098,231			
1998	Catch	292,862	173,045	465,907	195,454	50,165	245,619
	Escapement	390,325	351,910	742,235			
	Total	683,187	524,955	1,208,142			
1999	Catch	396,431	175,229	571,660	186,886	58,420	245,306
	Escapement	336,050	389,130	725,180			
	Total	732,481	564,359	1,296,840			

^aCatch numbers exclude test fish and subsistence harvests.

Appendix A.12. South Peninsula salmon harvest, all gear combined, by species and year, 1908-99.

Year	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum	Total
1908			0	69,400	0	0	0	69,400
1909			0	108,400	7,200	0	0	115,600
1910			0	46,300	5,500	0	0	51,800
1911			0	240,800	12,400	25,200	83,000	361,400
1912			0	334,400	27,000	40,400	195,000	596,800
1913			1,800	299,700	0	0	7,000	308,500
1914			600	628,900	0	311,000	221,100	1,161,600
1915			4,800	367,900	16,200	120,100	333,100	842,100
1916			6,800	730,900	34,100	576,100	508,900	1,856,800
1917			6,400	1,486,100	4,600	72,100	415,500	1,984,700
1918			8,700	1,014,100	16,300	2,150,000	1,501,000	4,690,100
1919			9,600	619,100	56,100	80,200	921,400	1,686,400
1920			7,800	1,142,300	47,700	2,109,800	934,000	4,241,600
1921			700	830,700	1,500	47,300	84,600	964,800
1922			6,900	3,376,800	2,200	756,700	349,300	4,491,900
1923			4,100	1,827,200	75,300	143,600	538,900	2,589,100
1924			3,900	1,352,000	127,300	3,931,300	1,330,700	6,745,200
1925			10,700	820,500	127,100	382,100	1,116,800	2,457,200
1926			9,500	3,071,500	193,800	3,719,700	1,179,800	8,174,300
1927			9,600	714,700	125,300	1,455,500	1,299,700	3,604,800
1928 ^a			7,700	971,500	96,600	900,900	2,416,300	4,393,000
1929 ^a			10,500	935,800	84,500	1,793,500	2,429,000	5,253,300
1930 ^a			10,900	935,200	161,100	6,094,800	1,278,100	8,480,100
1931 ^a			11,000	1,863,200	128,700	997,900	1,216,000	4,216,800
1932 ^a			17,400	2,977,300	112,300	3,604,800	817,300	7,529,100
1933 ^a			12,600	1,996,700	190,000	3,109,200	1,173,900	6,482,400
1934 ^a			17,600	1,372,400	247,100	6,538,500	1,940,300	10,115,900
1935 ^a			13,900	978,400	117,200	5,386,200	2,003,100	8,498,800
1936 ^a			14,400	3,662,600	284,600	9,471,000	2,310,900	15,743,500
1937 ^a			9,300	1,558,000	73,900	9,302,000	1,506,700	12,449,900
1938 ^a			6,400	772,100	220,700	7,169,100	1,476,600	9,644,900
1939 ^a			16,500	1,881,700	98,900	6,005,300	1,440,600	9,443,000
1940 ^a			9,100	1,040,300	184,200	7,182,800	2,326,300	10,742,700
1941 ^a			13,000	1,072,000	183,000	5,347,000	1,542,000	8,157,000
1942 ^a			4,800	810,100	123,000	6,762,600	1,321,100	9,021,600
1943 ^a			21,700	2,397,700	90,600	4,360,200	924,500	7,794,700
1944 ^a			9,900	538,600	238,700	2,653,800	985,600	4,426,600
1945 ^a			21,400	813,400	116,100	3,639,600	948,900	5,539,400
1946 ^a			6,100	752,300	151,400	1,964,000	1,219,900	4,093,700
1947 ^a			3,400	1,137,100	55,800	2,319,600	1,219,200	4,735,100
1948 ^a			1,200	285,900	39,200	1,683,700	1,139,600	3,149,600
1949 ^a			3,800	637,500	19,500	1,544,000	560,900	2,765,700

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Appendix A.12. (page 2 of 3)

Year	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum	Total
1950 ^a			4,000	1,745,300	70,700	1,613,700	562,500	3,996,200
1951			1,500	264,200	55,700	2,844,800	683,100	3,849,300
1952			9,200	894,500	39,200	908,500	1,040,800	2,892,200
1953			7,200	1,039,200	47,900	2,743,900	1,464,600	5,302,800
1954			4,200	636,300	49,400	2,033,300	1,413,400	4,136,600
1955			5,400	550,100	44,800	2,529,200	688,200	3,817,700
1956			4,800	641,400	61,900	2,740,700	1,618,700	5,067,500
1957			5,800	341,900	49,900	913,100	1,281,400	2,592,100
1958			800	186,100	70,600	1,385,200	841,000	2,483,700
1959			900	217,500	8,500	915,600	711,700	1,854,200
1960			1,700	379,000	1,800	1,197,500	904,400	2,484,400
1961			900	456,800	10,400	1,727,800	748,600	2,944,500
1962			3,300	420,000	12,500	1,965,500	824,800	3,226,100
1963			1,900	204,400	16,500	2,367,700	461,300	3,051,800
1964			2,000	370,800	13,600	2,740,400	751,000	3,877,800
1965			2,100	915,700	34,200	2,884,100	556,400	4,392,500
1966			1,400	606,200	6,300	302,300	494,400	1,410,600
1967			1,600	294,100	2,900	77,800	245,200	621,600
1968			1,400	699,800	31,100	1,287,100	325,300	2,344,700
1969			1,900	912,800	10,900	1,219,400	389,200	2,534,200
1970	219	4,679	1,806	1,779,525	32,571	1,737,985	993,349	4,545,236
1971	187	4,444	2,174	716,087	16,907	1,445,031	1,365,957	3,546,156
1972	210	3,124	1,332	557,422	8,021	78,221	731,814	1,376,810
1973	153	1,795	415	330,091	6,599	58,051	292,943	688,099
1974	96	853	581	197,153	9,366	100,601	71,826	379,527
1975	143	600	117	243,548	67	60,642	130,750	435,124
1976	217	2,705	2,196	375,027	216	2,366,833	532,503	3,276,775
1977	205	2,168	559	311,722	2,108	1,448,648	243,167	2,006,204
1978	248	3,860	773	579,411	60,774	5,590,145	546,182	6,777,285
1979	294	4,476	2,141	1,149,927	356,867	6,564,914	482,930	8,556,779
1980	284	5,107	4,794	3,613,025	274,181	7,861,470	1,353,112	13,106,582
1981	304	5,617	11,182	2,241,513	162,223	5,033,028	1,768,475	9,216,421
1982	302	6,286	9,845	2,345,981	256,046	6,734,905	2,272,495	11,619,272
1983	325	5,241	26,571	2,556,557	127,657	2,827,622	1,704,072	7,242,479
1984	334	6,378	9,198	2,318,028	310,950	11,589,258	1,654,622	15,882,056
1985	336	5,322	6,642	2,144,416	172,514	4,431,016	1,348,726	8,103,314
1986	335	5,132	5,589	1,223,089	235,854	4,031,487	1,749,651	7,245,670
1987	327	5,256	9,174	1,449,753	225,120	1,208,556	1,376,887	4,269,490
1988	330	6,478	11,075	1,473,651	505,533	7,044,824	1,908,507	10,943,590
1989	341	5,597	7,065	2,660,800	443,843	7,292,658	994,231	11,398,597
1990 ^b	354	6,403	16,522	2,386,844	307,218	2,865,856	1,237,826	6,814,266
1991 ^b	355	6,439	7,975	2,319,942	317,129	10,616,756	1,588,795	14,850,597

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Appendix A.12. (page 3 of 3)

Year	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum	Total
1992 ^b	341	6,512	8,026	3,445,914	418,232	9,770,386	1,316,709	14,959,267
1993 ^b	353	6,204	14,413	3,689,074	220,148	9,928,107	1,048,257	14,899,999
1994 ^b	343	6,750	10,002	2,107,233	255,905	9,179,853	2,192,079	13,745,072
1995 ^b	352	8,193	17,469	3,017,002	264,347	16,311,770	1,728,013	21,338,601
1996 ^b	331	5,875	5,520	1,543,134	293,374	2,207,503	794,642	4,844,173
1997 ^b	307	5,803	7,780	2,281,566	116,136	2,321,371	627,996	5,354,849
1998 ^b	311	8,014	4,919	2,183,195	154,194	8,047,998	721,068	11,111,374
1999 ^b	310	7,021	5,074	2,991,819	192,503	8,456,449	840,030	12,485,875
Average 1918-29 ^c			7,475	1,389,683	79,475	1,455,883	1,175,125	4,107,642
Average 1930-46 ^c			12,706	1,495,412	160,088	5,269,929	1,437,165	8,375,300
Average 1947-77 ^{c,d}			2,567	591,844	26,747	1,523,900	751,226	2,896,285
	179	2,546						
Average 1978-98 ^c			9,365	2,225,241	260,869	6,736,166	1,353,108	10,584,749
	324	5,950						
Average 1989-98			9,969	2,563,470	279,053	7,854,226	1,224,962	11,931,680
	339	6,579						

^a From 1928 until 1951 commercial salmon catches in the Aleutian Islands and the South Peninsula were combined. The Aleutian Islands catches are generally much smaller than South Peninsula harvests. The South Peninsula harvests are generally dominated by pink salmon. The 1978-95 Aleutian Islands average salmon harvest was 510,317 fish, while the 1978-95 average harvest for the South Peninsula was 11,164,963 salmon.

^b Salmon numbers include test fish harvests.

^c These historical averages are intended to illustrate how salmon productivity has fluctuated in the South Peninsula.

^d Permit and landing numbers are only available from 1970 through present.

Appendix A.13. South Peninsula commercial salmon harvest, all gear combined, by species and day, 1999.

Date	Permits	Landings	Number of Salmon					Total
			Chinook	Sockeye	Coho	Pink	Chum	
11-Jun	126	134	165	53,764	0	33	8,906	62,868
12-Jun	6	6	6	1,901	0	55	204	2,166
13-Jun	166	210	182	65,312	0	339	13,841	79,674
14-Jun	194	232	324	118,898	0	408	21,202	140,832
15-Jun	182	252	195	171,329	0	770	18,239	190,533
16-Jun	229	313	556	248,946	1	4,227	34,259	287,989
17-Jun	235	339	409	216,425	0	1,981	30,791	249,606
18-Jun	227	276	425	184,638	0	4,995	39,441	229,499
19-Jun	227	301	382	179,506	0	5,050	29,790	214,728
20-Jun	105	118	283	85,575	1	3,386	16,724	105,969
21-Jun	200	219	211	128,463	0	9,299	33,225	171,198
24-Jun	46	53	10	18,941	0	29	475	19,455
25-Jun	54	113	35	46,120	2	17	1,333	47,507
26-Jun	55	81	13	25,413	1	3	607	26,037
6-Jul	118	167	224	89,872	695	54,691	21,841	167,323
8-Jul	a	a	a	a	a	a	a	a
9-Jul	127	206	104	133,302	2,601	84,969	18,570	239,546
11-Jul	a	a	a	a	a	a	a	a
12-Jul	135	188	142	124,723	4,393	87,011	16,669	232,938
13-Jul	a	a	a	a	a	a	a	a
15-Jul	121	169	91	66,314	4,890	54,504	20,726	146,525
18-Jul	131	187	102	91,672	5,399	83,440	17,603	198,216
20-Jul	a	a	a	a	a	a	a	a
21-Jul	141	206	101	79,808	7,919	84,237	19,270	191,335
23-Jul	104	129	29	37,007	3,171	44,288	9,839	94,334
24-Jul	129	185	104	67,211	9,593	131,909	20,611	229,428
25-Jul	74	104	33	30,073	634	42,304	4,708	77,752
26-Jul	a	a	a	a	a	a	a	a
27-Jul	110	168	44	45,130	6,886	134,034	16,185	202,279
28-Jul	111	118	90	41,506	13,470	185,077	17,580	257,723
30-Jul	98	120	54	24,686	7,159	136,809	11,256	179,964
31-Jul	132	202	129	75,889	18,248	423,943	35,137	553,346
2-Aug	77	84	16	10,004	2,129	156,932	13,441	182,522
3-Aug	82	105	30	25,559	5,563	248,083	18,281	297,516
4-Aug	83	100	21	30,077	3,936	293,741	16,094	343,869
5-Aug	13	13	0	2,176	0	58,065	11,111	71,352
6-Aug	108	152	28	44,228	7,437	762,218	31,098	845,009
7-Aug	110	152	42	48,503	22,380	710,968	33,566	815,459
8-Aug	33	35	3	5,261	225	218,543	6,518	230,550
9-Aug	106	133	18	22,814	6,936	710,599	27,684	768,051
10-Aug	105	137	22	25,874	11,424	672,034	24,318	733,672
12-Aug	92	114	23	22,452	4,756	587,017	20,830	635,078

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Appendix A.13. (page 2 of 2)

Date	Permits	Landings	Number of Salmon					Total
			Chinook	Sockeye	Coho	Pink	Chum	
13-Aug	86	106	9	9,439	2,086	524,640	21,584	557,758
15-Aug	62	86	14	11,046	2,598	451,541	31,561	496,760
16-Aug	67	95	9	14,184	2,379	478,490	23,652	518,714
17-Aug	71	108	39	16,851	3,454	458,905	32,047	511,296
18-Aug	44	71	17	8,635	1,645	208,352	4,947	223,596
19-Aug	23	41	34	25,646	3,111	98,546	5,122	132,459
20-Aug	25	45	14	18,343	1,927	92,201	4,242	116,727
21-Aug	25	42	9	13,410	3,868	58,681	3,417	79,385
22-Aug	20	39	9	8,653	2,621	34,221	2,022	47,526
23-Aug	16	30	2	9,609	1,127	17,165	1,329	29,232
24-Aug	a	a	a	a	a	a	a	a
25-Aug	a	a	a	a	a	a	a	a
1-Sep	31	32	2	6,979	2,016	2,913	680	12,590
2-Sep	39	53	2	15,170	3,222	4,627	1,023	24,044
3-Sep	40	59	0	17,924	2,716	3,580	717	24,937
6-Sep	36	43	2	5,333	1,167	325	167	6,994
7-Sep	46	59	3	12,222	2,645	533	246	15,649
8-Sep	41	53	0	9,570	1,173	304	202	11,249
13-Sep	28	37	0	8,767	703	57	166	9,693
14-Sep	28	39	1	10,412	691	10	112	11,226
15-Sep	26	39	0	10,496	981	4	166	11,647
20-Sep	12	18	0	2,613	334	0	65	3,012
21-Sep	15	15	2	4,559	520	0	54	5,135
22-Sep	16	19	0	4,882	606	0	28	5,516
23-Sep	a	a	a	a	a	a	a	a
27-Sep	9	12	0	1,873	140	0	6	2,019
28-Sep	12	12	0	3,499	223	0	12	3,734
29-Sep	10	12	0	3,454	291	0	24	3,769
Total	309	6,997	4,815	2,948,267	192,485	8,443,343	816,966	12,405,876

^a Confidentiality requirements prohibit releasing this information.

Appendix A.14. South Peninsula commercial salmon harvest by species, statistical area, section, and district, 1999.

Statistical Area	Section	Number of Salmon					Total
		Chinook	Sockeye	Coho	Pink	Chum	
SOUTHEASTERN DISTRICT							
281-15	Kupreanof Point	7	10,251	470	43,585	2,419	56,732
281-25	Island/ Fox Bay	142	205,784	7,742	92,695	16,654	323,017
East Stepovak Section Total		149	216,035	8,212	136,280	19,073	379,749
281-30	Stepovak Flats Section	0	0	0	0	0	0
281-40	Grub Gulch/Clark Bay	8	14,492	404	7,121	2,830	24,855
281-50	Orzinski Bay	3	2,689	20	245	77	3,034
281-55	American Bay	0	9,923	152	6,101	1,728	17,904
281-62	Chichagof Bay	7	13,066	47	21,451	1,368	35,939
281-65	Suzy Creek/West Cove	1	8,728	232	19,865	221	29,047
281-67	Dornoi Bay	0	156	0	52,594	0	52,750
Northwest Stepovak Section Total		19	49,054	855	107,377	6,224	163,529
281-70	Southwest Stepovak Section	45	106,804	8,066	258,762	16,477	390,154
281-80	Balboa Bay Section	47	67,139	2,702	208,669	13,733	292,290
281-90	Beaver Bay Section	7	18,533	435	146,501	1,431	166,907
282-10	Popof Strait/Squaw Harbor	4	21,651	688	139,759	3,898	166,000
282-11	Unga Cape/East Popof	1,647	421,912	116,089	2,540,014	219,437	3,299,099
282-20	Acheredin Bay	32	55,741	1,708	106,517	9,240	173,238
282-25	West Unga Island	113	187,319	6,061	312,661	27,544	533,698
282-30	Bay Point	0	1,927	0	57	63	2,047
282-35	Zachary Bay	4	4,018	371	137,636	1,564	143,593
282-40	East Head/West Head	3	1,715	274	484	385	2,861
282-42	Korovin Island	334	141,534	11,716	107,841	38,115	299,540
282-45	Cape Wedge/Northeast Nagai	1	122	3	0	150	276
282-65	Southeast Nagai Island	2	7,931	236	9,872	1,439	19,480
282-70	Southwest Nagai Island	60	128,190	5,459	190,942	24,161	348,812
282-75	Cape Horn/Porpoise Rocks	2	21,743	640	11,171	2,262	35,818
282-80	East Nagai Strait	1	166	0	0	4	171
Shumagin Islands Section Total		2,203	993,969	143,245	3,556,954	328,262	5,024,633
SOUTHEASTERN DISTRICT TOTAL		2,470	1,451,534	163,515	4,414,543	385,200	6,417,262

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Appendix A.14. (page 2 of 3)

Statistical Area	Section	Number of Salmon					Total
		Chinook	Sockeye	Coho	Pink	Chum	
SOUTH CENTRAL DISTRICT							
283-15	Mino Creek	0	537	0	449	169	1,155
283-17	Coal Bay/Cape Tolstoi South	7	25,718	290	1,115,637	5,178	1,146,830
Mino Cr. - Little Coal B. Section Total		7	26,255	290	1,116,086	5,347	1,147,985
283-21	Northside Cape Tolstoi	0	15,649	288	40,024	1,410	57,371
283-23	Eastside Pavlof Bay	7	17,107	91	727,439	10,388	755,032
East Pavlof Bay Section Total		7	32,756	379	767,463	11,798	812,403
283-24	Canoe Bay Section	0	21	0	519,158	12,260	531,439
283-25	Northwest Pavlof Bay	0	1,299	7	33	125	1,464
283-26	Long Beach/Ukolnoi	15	53,418	1,738	95,336	40,121	190,628
West Pavlof Bay Section Total		15	54,717	1,745	95,369	40,246	192,092
SOUTH CENTRAL DISTRICT TOTAL		29	113,749	2,414	2,498,076	69,651	2,683,919
SOUTHWESTERN DISTRICT							
284-36	Volcano Bay	0	1,512	92	155,450	36,205	193,259
284-37	Northside Dolgoi Island	26	187,567	11,072	554,090	65,252	818,007
284-38	South Dolgoi/Moss Cape	7	27,946	540	148,723	12,407	189,623
Volcano Bay Section Total		33	217,025	11,704	858,263	113,864	1,200,889
284-42	Belkofski Bay	6	12,307	43	217,513	19,250	249,119
284-45	King Cove	0	2,899	42	141,824	10,809	155,574
Belkofski Bay Section Total		6	15,206	85	359,337	30,059	404,693
284-55	Deer Island Section	0	300	112	200,250	2,143	202,805
284-62	Outer Cold Bay	0	935	10	22325	1848	25,118
284-65	Lenard Harbor	0	120	2	23800	900	24,822
Cold Bay Section Total		0	1,055	12	46,125	2,748	49,940

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Appendix A.14. (page 3 of 3)

Statistical Area	Section	Number of Salmon					Total
		Chinook	Sockeye	Coho	Pink	Chum	
284-75	Thin Point Section	0	3,662	2,359	484	116	6,621
284-80	Morzhovoi Bay Section	28	3,979	138	109	589	4,843
284-90	Ikatan Bay Section	1,105	325,657	11,567	29,337	86,462	454,128
SOUTHWESTERN DISTRICT TOTAL		1,172	566,884	25,977	1,493,905	235,981	2,323,919
UNIMAK DISTRICT							
295-10	Sanak Island Section	0	0	0	0	0	0
285-20	Bird Island	112	56,976	76	8,371	11,845	77,380
285-30	Cape Lazaref	213	151,028	503	27,621	34,125	213,490
Otter Cove Section Total		325	208,004	579	35,992	45,970	290,870
285-40	Cape Lutke Section	819	608,096	0	827	80,164	689,906
UNIMAK DISTRICT TOTAL		1,144	816,100	579	36,819	126,134	980,776
SOUTH PENINSULA TOTAL		4,815	2,948,267	192,485	8,443,343	816,966	12,405,876

^aHarvest numbers do not include test fish catches.

Appendix A.15. South Peninsula commercial salmon harvest by species, district, and gear, 1999.

	Number of Salmon					Percent	
	Chinook	Sockeye	Coho	Pink	Chum	Total	of Harvest
SOUTHEASTERN DISTRICT							
Seine	2,015	670,559	131,518	4,100,000	290,773	5,194,865	81.0
Set gillnet	455	780,975	31,997	314,543	94,427	1,222,397	19.0
Total	2,470	1,451,534	163,515	4,414,543	385,200	6,417,262	100.0
SOUTH CENTRAL DISTRICT							
Seine	14	51,659	1,682	2,481,408	57,598	2,592,361	96.6
Set gillnet	15	62,090	732	16,668	12,053	91,558	3.4
Total	29	113,749	2,414	2,498,076	69,651	2,683,919	100.0
SOUTHWESTERN DISTRICT							
Seine	832	340,292	10,115	1,429,369	174,289	1,954,897	84.1
Drift gillnet	231	109,444	11,401	11,707	35,924	168,707	7.3
Set gillnet	109	117,148	4,461	52,829	25,768	200,315	8.6
Total	1,172	566,884	25,977	1,493,905	235,981	2,323,919	100.0
UNIMAK DISTRICT							
Seine	126	50,721	246	35,982	11,507	98,582	10.1
Drift gillnet	981	762,532	333	837	114,046	878,729	89.6
Set gillnet	37	2,847	0	0	581	3,465	0.4
Total	1,144	816,100	579	36,819	126,134	980,776	100.0
SOUTH PENINSULA TOTAL							
Seine	2,987	1,113,231	143,561	8,046,759	534,167	9,840,705	79.3
Drift gillnet	1,212	871,976	11,734	12,544	149,970	1,047,436	8.4
Set gillnet	616	963,060	37,190	384,040	132,829	1,517,735	12.2
Total	4,815	2,948,267	192,485	8,443,343	816,966	12,405,876	100.0

Appendix A.16. South Peninsula emergency order summary, 1999.

E.O.#	Issued	Effective	Action Taken
CB-01	5/22/99	6/01/99	<u>Closed Water Adjustment</u> from 6/1 through 6/30 all waters located south the latitude of Hague Rock (54 deg. 33 min. 10 sec. N. lat.) and east of the longitude of Cape Pankof (163 deg. 03 min. 36 sec. W. long.) south of the latitude of Hague Rock (near Sanak Island)
CB-02	6:30 PM 6/10/99	6:00 AM 6/11/99	<u>Opening</u> for 8 hours until 2:00 PM 6/11 for drift gillnet and seine gear and 16 hours until 10:00 PM 6/11 for set gillnet gear Unimak District, Bechevin Bay Section, Ikatan Bay Section, and that portion of the Southwestern District enclosed by a line from Cape Pankof Light to the southern tip of Thin Point to the northern tip of Stag Point to the southern most tip of Dolgoi Cape and from the northern tip of Bluff Point on Dolgoi Island to Arch Point.
CB-03	Noon 6/11/99	2:00 PM 6/11/99	<u>Extension</u> for 8 hours until 10:00 PM 6/11 for seine and drift gillnet gear Unimak District, Bechevin Bay Section, Ikatan Bay Section, and that portion of the Southwestern District enclosed by a line from Cape Pankof Light to the southern tip of Thin Point to the northern tip of Stag Point to the southern most tip of Dolgoi Cape and from the northern tip of Bluff Point on Dolgoi Island to Arch Point
CB-04	6:30 PM 6/11/99	10:00 PM 6/11/99	<u>Extension</u> for 17 hours until 3:00 PM 6/12 for set gillnet gear Unimak District, Bechevin Bay Section, Ikatan Bay Section, and that portion of the Southwestern District enclosed by a line from Cape Pankof Light to the southern tip of Thin Point to the northern tip of Stag Point to the southern most tip of Dolgoi Cape and from the northern tip of Bluff Point on Dolgoi Island to Arch Point
CB-05	Noon 6/12/99	6:00 AM 6/13/99	<u>Opening</u> for 8 hours until 2:00 PM 6/13 for seine and drift gillnet gear and for 16 hours until 10:00 PM 6/13 for set gillnet gear Unimak District, Bechevin Bay Section, Ikatan Bay Section, and that portion of the Southwestern District enclosed by a line from Cape Pankof Light to the southern tip of Thin Point to the northern tip of Stag Point to the southern most tip of Dolgoi Cape and from the northern tip of Bluff Point on Dolgoi Island to Arch Point
SP-01	6/12/99	6:00 AM 6/13/99	<u>Opening</u> for 10 hours until 4:00 PM 6/13 for seine gear and for 16 hours until 10:00 PM 6/13 for set gillnet gear Shumagin Islands Section
CB-06	Noon 6/13/99	2:00 PM 6/13/99	<u>Extension</u> for 8 hours until 10:00 PM 6/13 for seine and drift gillnet gear Unimak District, Bechevin Bay Section, Ikatan Bay Section, and that portion of the Southwestern District enclosed by a line from Cape Pankof Light to the southern tip of Thin Point to the northern tip of Stag Point to the southern most tip of Dolgoi Cape and from the northern tip of Bluff Point on Dolgoi Island to Arch Point

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Appendix A.16. (page 2 of 7)

E.O.#	Issued	Effective	Action Taken
SP-02	2:00 PM 6/13/99	4:00 PM 6/13/99	<u>Extension</u> for 6 hours for seine gear until 10:00 PM 6/13 Shumagin Islands Section
CB-07	7:00 PM 6/13/99	10:00 PM 6/13/99	<u>Extension</u> for 17 hours until 3:00 PM 6/14 Shumagin Islands Section, Unimak District, Bechevin Bay Section, Ikatan Bay Section, and that portion of the Southwestern District enclosed by a line from Cape Pankof Light to the southern tip of Thin Point to the northern tip of Stag Point to the southern most tip of Dolgoi Cape and from the northern tip of Bluff Point on Dolgoi Island to Arch Point
CB-08	11:00 AM 6/14/99	3:00 PM 6/14/99	<u>Extension</u> for 10 hours until 10:00 PM 6/14 Shumagin Islands Section, Unimak District, Bechevin Bay Section, Ikatan Bay Section, and that portion of the Southwestern District enclosed by a line from Cape Pankof Light to the southern tip of Thin Point to the northern tip of Stag Point to the southern most tip of Dolgoi Cape and from the northern tip of Bluff Point on Dolgoi Island to Arch Point
SP-03	11:00 AM 6/14/99	5:00 PM 6/15/99	<u>Opening</u> for 26 hours until 7:00 PM 6/17 for set gillnet gear East Stepovak, Stepovak Flats, Northwest Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections
CB-09	5:00 PM 6/14/99	10:00 PM 6/14/99	<u>Extension</u> for 17 hours until 3:00 PM 6/15 Bechevin Bay Section, Unimak District, Ikatan Bay Section, and that portion of the Southwestern District enclosed by a line from Cape Pankof Light to the southern tip of Thin Point, to the northern tip of Stag Point, to the southernmost tip of Dolgoi Cape and from the northern tip of Bluff Point on Dolgoi Island to Arch Point and in the Shumagin Islands Section.
CB-10	11:30 AM 6/15/99	3:00 PM 6/15/99	<u>Extension</u> for 24 hours until 3:00 PM 6/17 Bechevin Bay Section, Unimak District, Ikatan Bay Section, and that portion of the Southwestern District enclosed by a line from Cape Pankof Light to the southern tip of Thin Point, to the northern tip of Stag Point, to the southernmost tip of Dolgoi Cape and from the northern tip of Bluff Point on Dolgoi Island to Arch Point .
SP-04	Noon 6/15/99	3:00 PM 6/15/99	<u>Extension</u> for 24 hours for set net and seine gear until 3:00 PM on 6/16 Shumagin Island Section
CB-11	11:30 AM 6/16/99	3:00 PM 6/16/99	<u>Extension</u> for 24 hours until 3:00 PM 6/17 Bechevin Bay Section, Unimak District, Ikatan Bay Section, and that portion of the Southwestern District enclosed by a line from Cape Pankof Light to the southern tip of Thin Point, to the northern tip of Stag Point, to the southernmost tip of Dolgoi Cape and from the northern tip of Bluff Point on Dolgoi Island to Arch Point .

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Appendix A.16. (page 3 of 7)

E.O.#	Issued	Effective	Action Taken
SP-05	Noon 6/16/99	3:00 PM 6/16/99	<u>Extension</u> for 24 hours for seine and setnet gear until 3:00 PM 6/17 Shumagin Islands Section
SP-06	3:00 PM 6/16/99	7:00 PM 6/16/99	<u>Extension</u> for 24 hours until 7:00 PM 6/17 East Stepovak, Stepovak Flats, Northwest Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections.
CB-12	11:30 AM 6/17/99	3:00 PM 6/17/99	<u>Extension</u> for 24 hours until 3:00 PM 6/18 Bechevin Bay Section, Unimak District, Ikatán Bay Section, and that portion of the Southwestern District enclosed by a line from Cape Pankof Light to the southern tip of Thin Point, to the northern tip of Stag Point, to the southernmost tip of Dolgoi Cape and from the northern tip of Bluff Point on Dolgoi Island to Arch Point .
SP-07	Noon 6/17/99	3:00 PM 6/17/99	<u>Extension</u> for 7 hours for seine and setnet gear until 10:00 PM 6/17 Shumagin Islands Section
SP-08	3:00 PM 6/17/99	7:00 PM 6/17/99	<u>Extension</u> for 24 hours for setnet gear until 7:00 PM 6/18 East Stepovak, Stepovak Flats, Northwest Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections.
SP-09	6:00 PM 6/17/99	10:00 PM 6/17/99	<u>Extension</u> for 15 hours for setnet and seine gear until 1:00 PM 6/18 Shumagin Islands Section
CB-13	11:30 AM 6/18/99	3:00 PM 6/18/99	<u>Extension</u> for 24 hours until 3:00 PM 6/19 Bechevin Bay Section, Unimak District, Ikatán Bay Section, and that portion of the Southwestern District enclosed by a line from Cape Pankof Light to the southern tip of Thin Point, to the northern tip of Stag Point, to the southernmost tip of Dolgoi Cape and from the northern tip of Bluff Point on Dolgoi Island to Arch Point .
SP-10	Noon 6/18/99	7:00 PM 6/18/99	<u>Extension</u> for 24 hours for setnet gear until 7:00 PM 6/19 East Stepovak, Stepovak Flats, Northwest Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections.
CB-14	11:00 AM 6/19/99	3:00 PM 6/19/99	<u>Extension</u> for 24 hours until 3:00 PM 6/20 Bechevin Bay Section, Unimak District, Ikatán Bay Section, and that portion of the Southwestern District enclosed by a line from Cape Pankof Light to the southern tip of Thin Point, to the northern tip of Stag Point, to the southernmost tip of Dolgoi Cape and from the northern tip of Bluff Point on Dolgoi Island to Arch Point .
CB-15	10:30 AM 6/20/99	3:00 PM 6/20/99	<u>Extension</u> for 24 hours until 3:00 PM 6/21 Bechevin Bay Section, Unimak District, Iktan Bay Section, and that portion of the Southwestern District enclosed by a line from Cape Pankof Light to the southern tip of Thin Point, to the northern tip of Stag Point, to the southernmost tip of Dolgoi Cape and from the northern tip of Bluff Point on Dolgoi Island to Arch Point .

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Appendix A.16. (page 4 of 7)

E.O.#	Issued	Effective	Action Taken
SP-11	3:00 PM 6/23/99	1:00 PM 6/24/99	<u>Opening</u> for 25 hours until 2:00 PM 6/25 for set gillnet gear East Stepovak, Stepovak Flats, Northwest Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections.
SP-12	10:00 AM 6/25/99	2:00 PM 6/25/99	<u>Extension</u> for 25 hours for setnet gear until 3:00 PM 6/26 East Stepovak, Stepovak Flats, Northwest Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections.
CB-21	8:45 AM 7/4/99	12:01 AM 7/6/99	<u>Opening</u> for 21 hours until 9:00 PM 7/6 South Central District, Southwestern District, Otter Cove Section for all legal gear types and for set gillnet gear in the Shumagin Islands Section
CB-23	7:45 PM 7/5/99	12:01 AM 7/6/99	<u>Opening</u> for 21 hours until 9:00 PM 7/6 for seine gear that portion of the Shumagin Islands Section located outside of one nautical mile of Korovin and Popof islands and outside of one nautical mile of the south end of Unga Island between the southern tip of Acheredin Point and the Peter Pan Seafoods dock in Squaw Harbor.
CB-24	6:30 PM 7/7/99	9:00 PM 7/8/99	<u>Opening</u> for 24 hours until 9:00 PM 7/9 Shumagin Islands Section, South Central District, Southwestern District, Sanak Island Section, and Otter Cove Section.
CB-28	10:30 AM 7/10/99	9:00 PM 7/11/99	<u>Opening</u> for 24 hours until 9:00 PM 7/12 Shumagin Islands Section, South Central District, Southwestern District, Sanak Island Section, and Otter Cove Section.
CB-31	9:30 AM 7/13/99	9:00 PM 7/14/99	<u>Opening</u> for 24 hours until 9:00 PM 7/15 Shumagin Islands Section, South Central District, Southwestern District, Sanak Island Section, and Otter Cove Section
CB-32	11:00 AM 7/16/99	9:00 PM 7/17/99	<u>Opening</u> for 24 hours until 9:00 PM 7/18 Shumagin Islands Section, South Central District, Southwestern District, Sanak Island Section, and Otter Cove Section
CB-35	1:00 PM 7/19/99	9:00 PM 7/20/99	<u>Opening</u> for 24 hours until 9:00 PM 7/21 Shumagin Islands Section, South Central District, Southwestern District, Sanak Island Section, and Otter Cove Section
SP-13	1:00 PM 7/22/99	Noon 7/23/99	<u>Opening</u> for 10 hours for setnet and seine gear until 10:00 PM 7/23 East Stepovak, Stepovak Flats, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections.
CB-37	1:30 PM 7/22/99	Noon 7/23/99	<u>Opening</u> for 120 hours until Noon 7/28 Canoe Bay Section <u>Opening</u> for 36 hours until 11:59 PM 7/24 that portion of the South Central District outside of Canoe Bay Section, Southwestern District, Otter Cove Section, Sanak Island Section, and the Shumagin Islands Section.

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Appendix A.16. (page 5 of 7)

E.O.#	Issued	Effective	Action Taken
SP-14	10:30 AM 7/24/99	7:00 AM 7/25/99	<u>Opening</u> for 15 hours for setnet and seine gear until 10:00 PM 7/25 East Stepovak, Stepovak Flats, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections.
SP-15	1:30 PM 7/25/99	12:01 AM 7/27/99	<u>Opening</u> for 36 hours until Noon 7/28 Otter Cove Section, Sanak Island Section, Southwestern District, South Central District, and the Southeastern District <u>Closed Water Adjustments</u> Orzinski Bay: expanded to include entire bay
SP-16	1:00 PM 7/29/99	Noon 7/30/99	<u>Opening</u> for 36 hours until 11:59 PM 7/31 Otter Cove Section, Sanak Island Section, Southwestern District, South Central District, and the Southeastern District <u>Closed Water Adjustments</u> Orzinski Bay: expanded to include the entire bay
CB-40	10:30 AM 8/1/99	8:00 AM 8/2/99	<u>Opening</u> for 37 hours until 9:00 PM 8/3 Unimak, Southwestern, South Central, and Southeastern districts <u>Closed Water Adjustments</u> Orzinski Bay: increased to include the entire bay Thin Point Cove: reduced to include only those waters within 1,000 yards of the lagoon terminus and 500 yards from the other salmon stream emptying into Thin Point Cove
CB-41	7:30 PM 8/2/99	9:00 PM 8/3/99	<u>Extension</u> for 24 hours until 9:00 PM 8/4 Unimak, Southwestern, South Central, and Southeastern districts
CB-42	4:30 PM 8/4/99	8:00 AM 8/5/99	<u>Opening</u> for 61 hours until 9:00 PM 8/6 Belkofski Bay, Deer Island, Cold Bay, Thin Point, and Morzhovoi Bay sections <u>Closed Water Adjustments</u> Thin Point Cove: The reduction in closed waters to include only those waters within 1,000 yards of Thin Point Lagoon terminus and within 500 yards of the other salmon stream emptying into Thin Point Cove is extended through 9:00 PM August 7.
CB-43	10:30 AM 8/5/99	8:00 AM 8/6/99	<u>Opening</u> for 37 hours until 9:00 PM 8/7 Unimak, South Central, and Southeastern districts and that portion of the Southwestern District not presently open
CB-44	9:30 AM 8/7/99	3:00 PM 8/7/99	<u>Extension</u> for 48 hours from 9:00 PM 8/8 until 9:00 PM 8/9 South Central District, Volcano Bay Section, and Deer Island Section <u>Closed Water Adjustments</u> Mino, Eastern, and Southern creeks: reduced to include only those waters upstream from the terminus at the ocean shoreline

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Appendix A.16. (page 6 of 7)

E.O.#	Issued	Effective	Action Taken
C-45	11:30 AM 8/8/99	6:00 PM 8/8/99	<u>Opening</u> for 37 hours from 8:00 AM 8/9 until 9:00 PM 8/10 Southeastern, South Central, Southwestern, and Unimak districts and Bechevin Bay Section <u>Closed Waters Adjustments</u> Bear Bay: reduced to include only the inner bay west of the entrance Dry Lagoon and Bay Point Lagoon: reduced to include only those waters upstream from the lagoon terminus at the ocean shoreline
CB-46	11:00 AM 8/11/99	8:00 AM 8/12/99	<u>Opening</u> for 37 hours until 9:00 PM 8/13 Shumagin Islands Section, South Central District, Southwestern District, Unimak District, and Bechevin Bay Section
CB-47	11:30 AM 8/14/99	8:00 AM 8/15/99	<u>Opening</u> for 37 hours until 9:00 PM August 16 South Central District, Southwestern District, Unimak District, Balboa Bay Section, Beaver Bay Section, Shumagin Islands Section, and Bechevin Bay Section <u>Closed Water Adjustments</u> Effective 8:00 AM August 15 through August 31, the closed waters of Settlement Point Creek, Middle Creek, and all streams on Deer Island are reduced to include only those waters upstream from the terminus at the ocean shoreline
SP-17	6:30 PM 8/14/99	8:00 AM 8/15/99	<u>Opening</u> for 37 hours for set net and seine gear until 9:00 PM 8/16 Southwestern Stepovak Section
CB-48	Noon 8/16/99	9:00 PM 8/16/99	<u>Extension</u> for 24 hours until 9:00 PM 8/17 Bechevin Bay Section and that portion of the Alaska Peninsula Area's South Peninsula west of Renshaw Point, including the Shumagin Islands, but excluding that portion of the Volcano Bay Section located north of Arch Point Light
CB-49	11:00 AM 8/17/99	9:00 PM 8/17/99	<u>Extension</u> for 24 hours until 9:00 PM 8/18 Bechevin Bay Section and that portion of the Alaska Peninsula Area's South Peninsula west of Renshaw Point, including the Shumagin Islands, but excluding that portion of the Volcano Bay Section located north of Arch Point Light
CB-50	11:00 AM 8/18/99	9:00 PM 8/18/99	<u>Extension</u> for 24 hours until 9:00 PM 8/19 Bechevin Bay Section and that portion of the Alaska Peninsula Area's South Peninsula west of Renshaw Point, including the Shumagin Islands, but excluding that portion of the Volcano Bay Section located north of Arch Point Light
CB-51	11:00 AM 8/19/99	9:00 PM 8/19/99	<u>Extension</u> for 48 hours until 9:00 PM 8/21 Bechevin Bay Section and that portion of the Alaska Peninsula Area's South Peninsula west of Renshaw Point, including the Shumagin Islands, but excluding that portion of the Volcano Bay Section located north of Arch Point Light

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Appendix A.16. (page 7 of 7)

E.O.#	Issued	Effective	Action Taken
CB-52	11:30 AM 8/21/99	9:00 PM 8/21/99	<u>Extension</u> for 48 hours until 9:00 PM 8/23 Bechevin Bay Section and that portion of the Alaska Peninsula Area's South Peninsula west of Renshaw Point, including the Shumagin Islands, but excluding that portion of the Volcano Bay Section located north of Arch Point Light
CB-53	11:30 AM 8/23/99	9:00 PM 8/23/99	<u>Extension</u> for 24 hours until 9:00 PM 8/24 that portion of the Alaska Peninsula's south side located between McGinty Point to and including Cold Bay, but excluding that portion of Volcano Bay north of 55 ^o 13.00' N. lat.
CB-54	11:00 AM 8/26/99	9/1/99	<u>Opening</u> for 59 hours from 9:00 AM 9/1 until 8:00 PM 9/3 Southwestern, South Central, and Unimak districts <u>Closed Water Adjustments</u> Thin Point Cove: reduced to include only those waters within 1,000 yards of the Thin Point Lagoon outlet terminus and within 500 yards of the other salmon stream emptying into Thin Point Cove
SP-18	11:00 AM 8/26/99	9:00 AM 9/1/99	<u>Opening</u> for 59 hours until 8:00 PM 9/3 Southeastern District
SP-19	11:00 AM 8/26/99	12:01 AM 9/1/99	<u>Closed Water Adjustments</u> extends the closed waters in the East Stepovak Section, as described under 5 AAC 09.350 (37), from September 1 through October 31, 1999
SP-20	11:00 AM 9/4/99	9:00 AM 9/6/99	<u>Opening</u> for 59 hours until 8:00 PM 9/8 Southeastern District
CB-58	7:30 PM 9/4/99	8:00 PM 9/5/99	<u>Opening</u> for 35 hours from 9:00 AM 9/7 until 8:00 PM 9/8 Southwestern, South Central, and Unimak districts
SP-21	10:00 AM 9/8/99	9:00 AM 9/13/99	<u>Opening</u> for 59 hours until 8:00 PM 9/15 Southeastern District
SP-22	10:00 AM 9/15/99	9:00 AM 9/20/99	<u>Opening</u> for 59 hours until 8:00 PM 9/22 Southeastern District
SP-23	11:00 AM 9/22/99	9:00 AM 9/27/99	<u>Opening</u> for 59 hours until 8:00 PM 9/29 Southeastern District

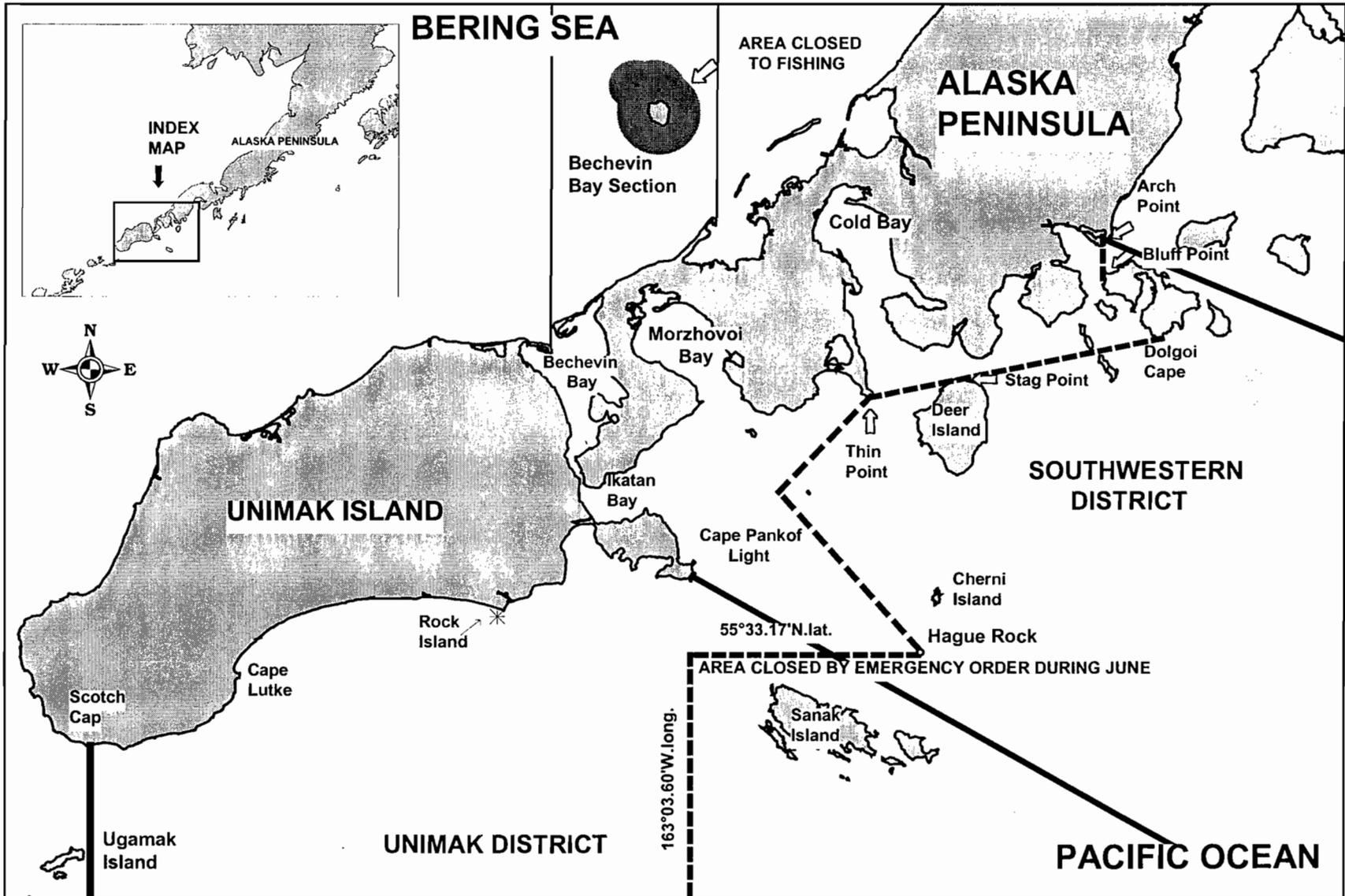
Appendix B.1. South Unimak and Shumagin Islands June commercial sockeye and chum salmon harvest, all gear combined, by year, 1911-99.

Year	Sockeye			Chum		
	South Unimak	Shumagin Islands	Total	South Unimak	Shumagin Islands	Total
1911	58,000	3,000	61,000			
1912	144,000	31,000	175,000			
1913	415,000	0	415,000			
1914	610,000	0	610,000			
1915	251,000	0	251,000			
1916	539,000	0	539,000			
1917	1,322,000	34,000	1,356,000			
1918	733,000	44,000	777,000			
1919	545,000	32,000	577,000			
1920	954,000	60,000	1,014,000			
1921	831,000	0	831,000			
1922	2,775,000	550,000	3,325,000			
1923	1,340,000	343,000	1,683,000			
1924	971,000	237,000	1,208,000			
1925	357,000	374,000	731,000	Information Unavailable		
1926	1,898,000	491,000	2,389,000			
1927	455,000	185,000	640,000			
			1928-1933 Unavailable			
1934	516,000	1,019,000	1,535,000			
1935	210,000	549,000	759,000			
1936	1,531,000	1,490,000	3,021,000			
1937	803,000	498,000	1,301,000			
1938	164,000	454,000	618,000			
1939	474,000	707,000	1,181,000			
1940	479,000	713,000	1,192,000			
1941	206,000	294,000	496,000			
1942	152,000	412,000	546,000			
1943	428,000	1,356,000	1,784,000			
1944	188,000	264,000	452,000			
1945	218,000	375,000	593,000			
1946	342,000	257,000	599,000			
1947	782,000	229,000	1,011,000			
1948	276,000	126,000	402,000			
1949	84,000	167,000	251,000			
1950	292,000	134,000	426,000			
1951	82,000	35,000	117,000			
1952	191,000	121,000	312,000			
1953	191,000	105,000	296,000			
1954	325,000	49,000	374,000			
1955	315,000	52,000	367,000			
1956	290,000	47,000	337,000			
1957	50,000	44,000	94,000			
1958	104,000	28,000	132,000			
1959	58,000	78,000	136,000			

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Appendix B.1. (page 2 of 2)

Year	Sockeye			Chum		
	South Unimak	Shumagin Islands	Total	South Unimak	Shumagin Islands	Total
1960	137,000	19,000	156,000	84,000	11,000	95,000
1961	199,000	55,000	254,000	157,000	36,000	193,000
1962	272,000	54,000	326,000	209,000	61,000	270,000
1963	116,000	33,000	149,000	36,000	36,000	72,000
1964	159,000	85,000	244,000	161,000	67,000	228,000
1965	568,000	207,000	775,000	121,000	45,000	166,000
1966	528,000	54,000	582,000	215,000	17,000	232,000
1967	186,000	69,000	255,000	73,000	51,000	124,000
1968	342,000	233,000	575,000	115,000	51,000	166,000
1969	781,000	76,000	857,000	254,000	13,000	267,000
1970	1,510,399	139,735	1,650,134	397,003	44,909	441,912
1971	422,760	39,341	462,101	405,311	103,886	509,197
1972	426,799	74,398	501,197	411,019	107,810	518,829
1973	222,586	22,964	245,550	177,720	22,910	200,630
1974	0	0	0	0	0	0
1975	190,774	49,325	240,099	65,279	35,543	100,822
1976	233,211	72,016	305,227	336,238	74,109	410,347
1977	195,680	45,912	241,592	94,215	21,899	116,114
1978	418,959	67,876	486,835	103,429	18,479	121,908
1979	672,293	179,139	851,432	63,153	40,953	104,106
1980	2,731,148	475,127	3,206,275	458,499	50,366	508,865
1981	1,470,563	350,572	1,821,135	509,911	54,071	563,982
1982	1,668,153	450,548	2,118,701	933,728	161,316	1,095,044
1983	1,547,369	416,494	1,963,863	616,390	169,277	785,667
1984	1,131,365	256,838	1,388,203	227,913	109,207	337,120
1985	1,454,969	336,431	1,791,400	324,825	109,004	433,829
1986	315,370	156,027	471,397	252,721	99,048	351,769
1987	653,536	140,567	794,103	406,077	37,064	443,141
1988	474,457	282,230	756,687	464,765	61,946	526,711
1989	1,347,547	396,958	1,744,505	407,635	47,528	455,163
1990	1,090,710	255,585	1,346,295	455,238	63,501	518,739
1991	1,215,658	333,272	1,548,930	670,103	102,602	772,705
1992	2,046,022	411,834	2,457,856	323,891	102,312	426,203
1993	2,366,573	607,171	2,973,744	381,941	150,306	532,247
1994	1,001,250	460,013	1,461,263	374,409	207,756	582,165
1995	1,451,490	653,831	2,105,321	342,307	195,126	537,433
1996	572,495	456,475	1,028,970	129,889	229,931	359,820
1997	1,179,179	449,002	1,628,181	196,016	126,309	322,325
1998	974,628	314,097	1,288,725	195,454	50,165	245,619
1999	1,106,208	269,191	1,375,399	186,886	58,420	245,306
1979-98 Average						
	1,268,239	369,111	1,597,255	386,743	108,389	488,947
1989-98 Average						
	1,324,555	430,637	1,705,175	374,619	128,732	503,351



Appendix B.2. Map of the South Unimak June fishery.

Appendix B.3. History of regulations for the South Unimak and Shumagin Islands June commercial salmon fisheries, 1962-99.

Year	South Unimak	Shumagin Islands
1962-66	5 days per week	5 days per week
1967-70	7 days per week	7 days per week
1971-72	6:00 A.M. Monday - 6:00 A.M. Saturday	7 days per week
1973	*Four 13 hour fishing periods per week	*Four 13 hour fishing periods per week.
	*Both fisheries were closed by emergency order during June 25-28 due to indications of the Bristol Bay run being below escapement requirements.	
1974	No fishery	No fishery
1975-83	**6.8% of predicted Bristol Bay catch	1.5% of predicted Bristol Bay catch
1984-89	No more than 96 hours per 7 day period and no more than 72 hours of consecutive fishing time in each fishery (windows).	
1986	**6.8% allocation minus June 26-30 segment Windows No fishing before June 11	1.5% allocation minus June 26-30 segment Windows No fishing before June 11
	A 400,000 chum salmon ceiling placed on both fisheries combined.	
1987	**Same as during 1984-85 for both fisheries.	
1988-89	**6.8% of predicted Bristol Bay catch Windows	1.5% of predicted Bristol Bay catch Windows
	A 500,000 chum salmon ceiling placed on both fisheries combined.	

**Each sockeye allocation is broken down into time period guideline harvest levels.

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Dates	South Unimak	Shumagin Islands						
June 1 - 11	5%	9%						
June 12 - 18	29%	28%						
June 19 - 25	51%	41%						
June 26 - 30	<u>15%</u>	<u>22%</u>						
	100%	100%						
1990-91	<p>The chum salmon ceiling was increased from 500,000 to 600,000.</p> <p>The "Window Regulations" implemented in 1984 to limit the amount of fishing time that could be allowed were deleted.</p> <p>The season was delayed until June 13 and the time period sockeye allocations for both fisheries were changed as follow:</p> <table> <tr> <td>June 13-18</td> <td>35%</td> </tr> <tr> <td>June 19-25</td> <td>45%</td> </tr> <tr> <td>June 26-30</td> <td>20%</td> </tr> </table> <p>The gear depth for seines was limited to 375 meshes of which mesh size may not exceed 3-1/2 inches except for the first 25 meshes above the lead line which may not exceed 7 inches.</p> <p>The gear depth on gillnets along the South Peninsula was limited to no more than 90 meshes.</p> <p>Seine leads may not exceed 150 fathoms for the entire Alaska Peninsula.</p>		June 13-18	35%	June 19-25	45%	June 26-30	20%
June 13-18	35%							
June 19-25	45%							
June 26-30	20%							
1992-93	<p>The chum salmon ceiling was increased from 600,000 to 700,000 fish. Fishing time for set gillnet gear could not be less than 16 hours unless a 16 hour period would result in a harvest that exceeded the cap for chum salmon. The other regulations were the same as in effect for 1990 and 1991.</p>							
1994	<p>Sockeye salmon time period allocations eliminated. ADF&G given flexibility to open fishery prior to June 13 if sockeye to chum salmon ratios are favorable.</p>							

-Continued-

Dates	South Unimak	Shumagin Islands
1995-97	<p>The amount fishing time allowed for seine and drift gillnet gear after June 24 is limited if the sockeye to chum salmon ratio is two to one or less.</p> <p>The Board of Fisheries stated it's intent that the maximum harvest or less of 700,000 chum salmon supersedes attempts to reach the sockeye guideline harvest levels.</p> <p>The fisheries could not be extended into July regardless of weather during late June.</p> <p>Fishery cannot begin prior to June 11.</p> <p>Removed mesh size requirements for gillnets.</p>	
1998-99	<p>The chum salmon ceiling was lowered from 700,000 to a "floating cap" that can range between 350,000 and 650,000.</p> <p>A commercial fishery for all gear types may open on June 10 if sockeye to chum salmon ratios are favorable.</p> <p>In South Unimak District the shoreward end of set gillnet must be within one half mile of shore.</p> <p>All salmon caught must be retained and reported.</p> <p>Use of aircraft to locate salmon prohibited for the entire Alaska Peninsula for the entire season.</p>	

Appendix B.4. South Unimak and Shumagin Islands June fisheries commercial salmon harvest, all gear combined, by species and year, 1970-99.

Year	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum	Total
1970	202	2,926	1,016	1,650,134	48	107,445	441,912	2,200,555
1971	166	1,986	828	462,101	1	19,240	509,197	991,367
1972	185	2,097	642	501,197	20	17,924	518,829	1,038,612
1973	142	1,043	247	245,550	28	19,430	200,630	465,885
1974 ^a	0	0	0	0	0	0	0	0
1975	108	510	117	240,099	1	5,247	100,822	346,286
1976	147	1,393	2,134	305,227	3	23,902	410,347	741,613
1977	131	821	521	241,592	0	5,398	116,114	363,625
1978	159	1,570	536	486,835	3	89,942	121,908	699,224
1979	196	1,697	1,053	851,432	290	154,813	104,106	1,111,694
1980	225	2,044	3,193	3,206,275	853	1,526,306	508,865	5,245,492
1981	243	2,401	5,672	1,821,135	320	451,252	563,982	2,842,361
1982	251	2,612	7,131	2,118,701	1,241	1,718,825	1,095,044	4,940,942
1983	282	1,729	13,463	1,963,863	496	55,875	785,667	2,819,364
1984	280	1,117	3,854	1,388,203	14	919,876	337,120	2,649,067
1985	305	2,117	5,777	1,791,400	2,468	106,615	433,829	2,340,089
1986	298	1,486	1,895	471,397	2	291,989	351,769	1,117,052
1987	290	2,027	5,163	794,103	380	16,982	443,141	1,259,769
1988	301	1,777	4,064	756,687	255	180,224	526,711	1,467,941
1989	305	1,350	2,758	1,744,505	0	199,235	455,163	2,401,661
1990	321	2,731	10,333	1,346,295	1	515,240	518,739	2,390,608
1991	334	2,025	4,473	1,548,930	12	619,137	772,705	2,945,257
1992	322	1,925	3,760	2,457,856	4	642,090	426,203	3,529,913
1993	328	2,262	9,466	2,973,744	1,233	81,136	532,247	3,597,826
1994	325	2,751	7,590	1,461,263	1,579	2,492,514	582,165	4,545,111
1995	332	3,635	14,747	2,105,321	6,042	178,635	537,433	2,842,178
1996	313	2,676	2,845	1,028,970	13,219	377,684	359,820	1,782,538
1997	292	6,335	5,811	1,628,181	560	605,937	322,325	2,562,814
1998	283	3,657	2,696	1,288,725	476	474,340	245,619	2,011,856
1999	277	2,114	3,051	1,375,399	2	30,539	245,306	1,654,297
1979-98 Average								
	291	2,418	5,787	1,637,349	1,472	580,435	495,133	2,720,177
1989-98 Average								
	316	2,935	6,448	1,758,379	2,313	618,595	475,242	2,860,976

^a The South Unimak and Shumagin Island fisheries were closed in 1974 due to a weak Bristol Bay run.

Appendix B.5. South Unimak June commercial salmon harvest, all gear combined, by species and year, 1970-99.

Year	Permit	Landings	Chinook	Sockeye	Coho	Pink	Chum	Total
1970	176	2,627	868	1,510,399	46	87,717	397,003	1,996,033
1971	147	1,685	549	422,760	0	11,608	405,311	840,228
1972	166	1,770	400	426,799	4	11,906	411,019	850,128
1973	133	923	145	222,586	11	11,152	177,720	411,614
1974	0	0	0	0	0	0	0	0
1975	98	445	101	190,774	1	3,205	65,279	259,360
1976	133	1,192	1,829	233,211	3	18,259	336,238	589,540
1977	120	744	393	195,680	0	3,397	94,215	293,685
1978	141	1,338	269	418,959	3	47,380	103,429	570,040
1979	158	1,305	578	672,293	38	49,000	63,153	785,062
1980	188	1,666	2,927	2,731,148	853	1,140,611	458,499	4,334,038
1981	226	2,097	4,455	1,470,563	83	325,004	509,911	2,310,016
1982	225	2,313	5,577	1,668,153	1,241	1,032,154	933,728	3,640,853
1983	258	1,418	8,186	1,547,369	493	40,441	616,390	2,212,879
1984	226	814	2,024	1,131,365	0	470,688	227,913	1,831,990
1985	255	1,593	4,101	1,454,969	2	69,811	324,825	1,853,708
1986	236	1,093	1,363	315,370	1	150,674	252,721	720,129
1987	229	1,746	4,017	653,536	380	11,342	406,077	1,075,352
1988	211	1,144	2,125	474,457	11	86,678	464,765	1,028,036
1989	266	1,035	2,263	1,347,547	0	154,168	407,635	1,911,613
1990	271	2,146	8,465	1,090,710	1	444,442	455,238	1,998,856
1991	267	1,628	3,066	1,215,658	5	500,922	670,103	2,389,754
1992	273	1,597	2,373	2,046,022	3	501,127	323,891	2,873,416
1993	245	1,681	4,587	2,366,573	506	37,735	381,941	2,791,342
1994	265	1,927	4,468	1,001,250	1,271	1,731,741	374,409	3,113,139
1995	241	2,575	7,850	1,451,490	5,102	119,094	342,307	1,925,843
1996	230	1,797	1,228	572,495	11,730	146,799	129,889	862,141
1997	225	2,299	3,041	1,179,179	501	332,262	196,016	1,710,999
1998	196	2,432	1,259	974,628	312	125,906	195,454	1,297,559
1999	224	1,741	2,258	1,106,208	1	20,302	186,886	1,315,655
1979-98 Average								
	235	1,715	3,698	1,268,239	1,127	373,530	386,743	2,033,336
1989-98 Average								
	248	1,912	3,860	1,324,555	1,943	409,420	347,688	2,087,466

Appendix B.6 Shumagin Islands June commercial salmon harvest, all gear combined, by species and year, 1970-99.

Year	Permit	Landings	Chinook	Sockeye	Coho	Pink	Chum	Total
1970	40	299	148	139,735	2	19,728	44,909	204,522
1971	31	301	279	39,341	1	7,632	103,886	151,139
1972	32	327	242	74,398	16	6,018	107,810	188,484
1973	21	120	102	22,964	17	8,278	22,910	54,271
1974	0	0	0	0	0	0	0	0
1975	20	65	16	49,325	0	2,042	35,543	86,926
1976	30	201	305	72,016	0	5,643	74,109	152,073
1977	25	77	128	45,912	0	2,001	21,899	69,940
1978	30	232	267	67,876	0	42,562	18,479	129,184
1979	47	392	475	179,139	252	105,813	40,953	326,632
1980	54	378	266	475,127	0	385,695	50,366	911,454
1981	43	304	1,217	350,572	237	126,248	54,071	532,345
1982	48	299	1,554	450,548	0	686,671	161,316	1,300,089
1983	69	311	5,277	416,494	3	15,434	169,277	606,485
1984	99	303	1,830	256,838	14	449,188	109,207	817,077
1985	110	524	1,676	336,431	2,466	36,804	109,004	486,381
1986	72	393	532	156,027	1	141,315	99,048	396,923
1987	97	281	1,146	140,567	0	5,640	37,064	184,417
1988	97	633	1,939	282,230	244	93,546	61,946	439,905
1989	104	315	495	396,958	0	45,067	47,528	490,048
1990	95	585	1,868	255,585	0	70,798	63,501	391,752
1991	101	397	1,407	333,272	7	118,215	102,602	555,503
1992	103	328	1,387	411,834	1	140,963	102,312	656,497
1993	106	581	4,879	607,171	727	43,401	150,306	806,484
1994	106	824	3,122	460,013	308	760,773	207,756	1,431,972
1995	102	1,060	6,897	653,831	940	59,541	195,126	916,335
1996	111	879	1,617	456,475	1,489	230,885	229,931	920,397
1997	99	875	2,770	449,002	59	273,675	126,309	851,815
1998	91	1,225	1,437	314,097	164	348,434	50,165	714,297
1999	86	373	793	269,191	1	10,237	58,420	338,642
1979-98 Average								
	88	544	2,090	369,111	346	206,905	108,389	686,840
1989-98 Average								
	102	707	2,588	433,824	370	209,175	127,554	773,510

Appendix B.7. South Unimak and Shumagin Islands June fisheries, sockeye salmon allocations versus actual harvest and allocations if Bristol Bay runs were perfectly forecasted, 1975-99.

Year	S. Unimak-Shumagin Islands Guideline Harvest Level (GHL)	Actual S. Unimak-Shumagin Is. Harvest ^a	Actual Bristol Bay Harvest	Combined Bristol Bay & S. Unimak-Shumagin Harvest	S. Unimak-Shumagin GHL % of Combined Bristol Bay & S. Unimak-Shumagin Harvest ^b	S. Unimak Shumagin Is. Harvest % of Combined Bristol Bay-S. Unimak Harvest ^b	S. Unimak Shumagin Is. GHL if Actual Bristol Bay Harvest Was Forecasted ^b
1975	215,000	240,099	4,898,814	5,138,913	4.18	4.67	427,000
1976	425,000	305,227	5,619,292	5,924,519	7.17	5.15	492,000
1977	237,000	241,592	4,877,880	5,119,472	4.63	4.72	425,000
1978	522,000	486,835	9,928,139	10,414,974	5.01	4.67	864,000
1979	1,100,000	851,432	21,428,606	22,280,038	4.94	3.82	1,849,000
1980 ^c	3,068,000	3,206,275	23,761,746	26,968,021	11.38	11.89	2,238,000
1981	1,760,000	1,821,135	25,603,081	27,424,216	6.42	6.64	2,276,000
1982	2,258,000	2,118,701	15,104,391	17,223,092	13.11	12.3	1,430,000
1983	1,793,000	1,963,863	37,372,031	39,335,894	4.56	4.99	3,265,000
1984	1,356,000	1,388,203	24,710,306	26,098,509	5.20	5.32	2,166,000
1985	1,685,000	1,791,400	23,702,883	25,494,283	6.61	7.03	2,116,000
1986 ^d	1,107,000	471,397	15,776,056	16,247,453	6.81	2.90	1,349,000
1987	775,000	794,103	16,068,775	16,862,878	4.60	4.71	1,400,000
1988 ^d	1,542,000	756,687	13,989,757	14,746,444	10.46	5.13	1,224,000
1989	1,463,000	1,744,505	28,735,306	30,479,811	4.80	5.72	2,530,000
1990	1,327,000	1,346,295	33,523,127	34,869,422	3.81	3.86	2,894,000
1991 ^d	1,920,000	1,548,930	25,821,180	27,370,110	7.01	5.66	2,272,000
1992	2,391,000	2,457,856	31,879,676	34,337,532	6.96	7.16	2,850,000
1993	2,899,000	2,973,744	40,462,124	43,435,868	6.67	6.85	3,605,100
1994	3,586,000	1,461,263	35,224,050	36,685,313	9.78	3.98	3,045,000
1995	3,646,000	2,105,321	44,266,217	46,371,538	7.86	4.54	3,849,000
1996	3,130,000	1,028,970	29,588,297	30,679,270	10.20	3.35	2,546,000
1997	2,246,000	1,628,181	12,309,000	13,937,181	16.20	11.68	1,157,000
1998	1,865,000	1,288,725	10,035,601	11,324,326	16.47	11.38	939,919
1999 ^e	1,250,000	1,375,399	25,310,032	26,685,431	4.68	5.15	2,214,891

^a Salmon numbers exclude test fish harvests.

^b These values were calculated by adding the actual Bristol Bay sockeye salmon harvest and the South Unimak and Shumagin Islands June sockeye salmon harvests and calculating the appropriate percentages. Calculations assume all sockeye salmon caught at South Unimak and the Shumagin Islands are destined for Bristol Bay.

^c The 1980 Bristol Bay sockeye salmon catch would have been much larger had it not been for a lengthy strike.

^d Sockeye salmon allocations were not reached largely, if not totally, due to a chum cap.

^e Bristol Bay harvest numbers are preliminary.

Appendix B.8. South Unimak June fishery, sockeye salmon allocations versus actual harvest and allocations if Bristol Bay runs were perfectly forecasted, 1975-99.

Year	S. Unimak Guideline Harvest Level (GHL)	Actual S. Unimak Harvest	Actual Bristol Bay Harvest	Combined Bristol Bay & S. Unimak- Shumagin Harvest	S. Unimak GHL of Combined Bristol Bay & S. Unimak- Shumagin Harvest ^a	S. Unimak Harvest % of Combined Bristol Bay- S. Unimak Harvest ^b	S. Unimak GHL if Actual Bristol Bay Harvest Was Forecasted ^b
1975	165,000	190,774	4,898,814	5,138,913	3.21	3.71	349,000
1976	350,000	233,211	5,619,292	5,924,519	5.91	3.94	403,000
1977	195,000	195,680	4,877,880	5,119,472	3.81	3.82	348,000
1978	428,000	418,959	9,928,139	10,414,974	4.11	4.02	708,000
1979	900,000	672,293	21,428,606	22,280,038	4.04	3.02	1,515,000
1980 ^c	2,513,000	2,731,148	23,761,746	26,968,021	9.32	10.13	1,834,000
1981	1,442,000	1,470,563	25,603,081	27,424,216	5.26	5.36	1,865,000
1982	1,850,000	1,668,153	15,104,391	17,223,092	10.74	9.69	1,171,000
1983	1,469,000	1,547,369	37,372,031	39,335,894	3.73	3.93	2,675,000
1984	1,111,000	1,131,365	24,710,306	26,098,509	4.26	4.33	1,775,000
1985	1,380,000	1,454,969	23,702,883	25,494,283	5.41	5.71	1,734,000
1986 ^d	907,000	315,370	15,776,056	16,247,453	5.58	1.94	1,105,000
1987	635,000	653,536	16,068,775	16,862,878	3.77	3.88	1,147,000
1988 ^d	1,263,000	474,457	13,989,757	14,746,444	8.56	3.22	1,003,000
1989	1,199,000	1,347,547	28,735,306	30,479,811	3.93	4.42	2,073,000
1990	1,087,000	1,090,710	33,523,127	34,869,422	3.12	3.13	2,371,000
1991 ^d	1,573,000	1,215,658	25,821,180	27,370,110	5.75	4.44	1,861,000
1992	1,959,000	2,046,022	31,879,676	34,337,532	5.71	5.96	2,335,000
1993	2,375,000	2,366,573	40,462,124	43,435,868	5.47	5.45	2,954,000
1994	2,938,000	1,001,250	35,224,050	36,685,313	8.01	2.73	2,495,000
1995	2,987,000	1,451,490	44,266,217	46,371,538	6.44	3.13	3,153,000
1996	2,564,000	572,495	29,588,297	30,160,792	8.01	1.90	2,050,934
1997	1,840,000	1,179,179	12,158,777	13,786,958	13.35	8.55	937,513
1998	1,529,000	974,628	10,035,601	11,324,326	13.50	8.61	770,054
1999 ^e	1,024,000	1,106,208	25,310,032	26,685,431	3.84	4.15	1,814,609

^a Salmon numbers exclude test fish harvests.

^b These values were calculated by adding the actual Bristol Bay sockeye salmon harvest and the South Unimak and Shumagin Islands June sockeye salmon harvest and calculating the appropriate percentages. Calculations assume all sockeye salmon caught at South Unimak and the Shumagin Islands are destined for Bristol Bay.

^c The 1980 Bristol Bay sockeye salmon catch would have been much larger had it not been for a lengthy strike.

^d Sockeye salmon allocations were not reached largely, if not totally, due to a chum cap.

^e Bristol Bay harvest numbers are preliminary.

Appendix B.9. Shumagin Islands June fishery, sockeye salmon allocations versus actual harvest and allocations if Bristol Bay runs were perfectly forecasted, 1975-99.

Year	Shumagin Islands Guideline Harvest Level (GHL)	Actual Shumagin Is. Harvest	Actual Bristol Bay Harvest	Combined Bristol Bay & S. Unimak- Shumagin Harvest	Shumagin GHL % of Combined Bristol Bay & S. Unimak- Shumagin Harvest ^a	Shumagin Is. Harvest % of Combined Bristol Bay- S. Unimak Harvest ^b	Shumagin Is. GHL if Actual Bristol Bay Harvest Was Forecasted ^b
1975	50,000	49,325	4,898,814	5,138,913	0.97	0.96	77,000
1976	75,000	72,016	5,619,292	5,924,519	1.27	1.22	89,000
1977	42,000	45,912	4,877,880	5,119,472	0.82	0.9	77,000
1978	94,000	67,876	9,928,139	10,414,974	0.9	0.65	156,000
1979	200,000	179,139	21,428,606	22,280,038	0.9	0.8	334,000
1980 ^c	555,000	475,127	23,761,746	26,968,021	2.06	1.76	405,000
1981	318,000	350,572	25,603,081	27,424,216	1.16	1.28	411,000
1982	408,000	450,548	15,104,391	17,223,092	2.37	2.62	258,000
1983	324,000	416,494	37,372,031	39,335,894	0.82	1.06	590,000
1984	245,000	256,838	24,710,306	26,098,509	0.94	0.98	391,000
1985	305,000	336,431	23,702,883	25,494,283	1.20	1.32	382,000
1986 ^d	200,000	156,027	15,776,056	16,247,453	1.23	0.96	244,000
1987	140,000	140,567	16,068,775	16,862,878	0.83	0.83	253,000
1988 ^d	279,000	282,230	13,989,757	14,746,444	1.89	1.91	221,000
1989	264,000	396,958	28,735,306	30,479,811	0.87	1.3	457,000
1990	240,000	255,585	33,523,127	34,869,422	0.69	0.73	523,000
1991 ^d	347,000	333,272	25,821,180	27,370,110	1.27	1.22	411,000
1992	432,000	411,834	31,879,676	34,337,532	1.26	1.2	515,000
1993	524,000	607,171	40,462,124	43,435,868	1.21	1.4	652,000
1994	648,000	460,013	35,224,050	36,685,313	1.77	1.25	550,000
1995	659,000	653,831	44,266,217	46,371,538	1.42	1.41	696,000
1996	566,000	456,475	29,588,297	30,044,772	1.88	1.52	451,000
1997	406,000	449,002	12,158,777	13,786,958	2.94	3.26	206,804
1998	336,000	314,097	10,035,601	11,324,326	2.97	2.77	169,136
1999 ^e	226,000	269,191	25,310,032	26,685,431	0.85	1.01	400,281

^a Salmon numbers exclude test fish harvests.

^b These values were calculated by adding the actual Bristol Bay sockeye salmon harvest and the South Unimak and Shumagin Islands June sockeye salmon harvest and calculating the appropriate percentages. Calculations assume all sockeye salmon caught at South Unimak and the Shumagin Islands are destined for Bristol Bay.

^c The 1980 Bristol Bay sockeye salmon catch would have been much larger had it not been for a lengthy strike.

^d Sockeye salmon allocations were not reached largely, if not totally, due to a chum salmon cap.

^e Bristol Bay harvest numbers are preliminary.

Appendix B.10. South Unimak and Shumagin Islands June fisheries, number of fishing days and hours open to commercial fishing by year, 1975- 99^a.

Year	South Unimak		Shumagin Islands	
	Days	Hours	Days	Hours
1975	10	240	9	207
1976 ^b	19	456	13	312
1977	17	408	11	264
1978	23	552	23	552
1979 ^c	33	786	27	642
1980	30	720	30	720
1981	24	576	22	528
1982	30	720	24	576
1983	11	264	10	228
1984	5	110	6	134
1985	9	144	9	140
1986	8	148	8	160
1987	12	224	6	92
1988	8	112	9	153
1989	5	84	4	72
1990	13	281	9	200
1991	8	161	5	88
1992	8	139	5	38.5
1993	10	176	8	140
1994	14	262	13	265
1995	18	366	17	339
1996	16	372	13	276
1997	18	418	14	237
1998	18	424	16	346
1999	10	217	6	127
Average 1989-98	12.8	268.3	10.4	200.2

^a Figures are for fishing time allowed for seine and/or drift gillnet gear only. After 1992, set gillnet gear was guaranteed 16 hours per fishing period regardless of the other gear types.

^b In 1976, the South Unimak fishery was extended through July 1 to compensate for fishing time lost at the end of June due to adverse weather conditions.

^c In 1979, the South Unimak fishery was extended through July 3 to compensate for lost fishing time at the end of June due to adverse weather conditions.

Appendix B.11. South Unimak June test fishery salmon catches by species, date, and location, 1999.

Date/ Location	Number of sets	Number of Salmon					Total Salmon	Ratio Sockeye to 1 Chum
		Chinook	Sockeye	Coho	Pink	Chum		
<i>7-Jun</i>								
East Anchor/Cape Pankof	5	2	42	0	0	68	112	0.62
Cape Lutke	10	12	171	0	7	111	301	1.54
All Locations	15	14	213	0	7	179	413	1.19
	Average Per Set	0.9	14.2	0.0	0.5	11.9		
	Catch Composition by %	3.39%	51.57%	0.00%	1.69%	43.34%		
<i>8-Jun</i>								
East Anchor/Cape Pankof	5	16	474	0	3	399	892	1.19
Cape Lutke	10	19	1,348	0	11	710	2,088	1.90
All Locations	15	35	1,822	0	14	1,109	2,980	1.64
	Average Per Set	2.3	121.5	0.0	0.9	73.9		
	Catch Composition by %	1.17%	61.14%	0.00%	0.47%	37.21%		
<i>9-Jun</i>								
East Anchor/Cape Pankof	5	20	1,003	0	0	503	1,526	1.99
Cape Lutke	10	21	1,781	0	24	666	2,492	2.67
All Locations	15	41	2,784	0	24	1,169	4,018	2.38
	Average Per Set	2.7	185.6	0.0	1.6	77.9		
	Catch Composition by %	1.02%	69.29%	0.00%	0.60%	29.09%		
<i>10-Jun</i>								
East Anchor/ Cape Lazaref	15	50	5,220	0	30	799	6,099	6.53
All Locations	15	50	5,220	0	30	799	6,099	6.53
	Average Per Set	3.3	348.0	0.0	2.0	53.3		
	Catch Composition by %	0.82%	85.59%	0.00%	0.49%	13.10%		

Appendix B.12. Shumagin Islands June test fishery salmon catches by species and date, 1999.

Date	Number of Sets	Number of Adult Salmon					Total	Ratio Sockeye to Chum Salmon
		Chinook	Sockeye	Coho	Pink	Chum		
5-Jun	5	0	354	0	11	1,029	1,394	0.3
Average Per Set		0	71	0	2	206	279	
6-Jun	5	0	2,359	0	65	1,058	3,482	2.2
Average Per Set		0	472	0	13	212	696	
7-Jun	5	10	2,026	0	58	1,597	3,691	1.3
Average Per Set		2	405	0	12	319	738	
8-Jun	5	8	1,511	0	45	1,045	2,609	1.4
Average Per Set		2	302	0	9	209	522	
9-Jun	5	3	812	0	26	1,508	2,349	0.5
Average Per Set		1	162	0	5	302	470	
10-Jun	5	44	4,868	0	144	5,255	10,311	0.9
Average Per Set		9	974	0	29	1,051	2,062	
11-Jun	5	10	5,940	0	266	2,358	8,574	2.5
Average Per Set		2	1,188	0	53	472	1,715	
12-Jun	4	12	3,170	0	96	1,162	4,440	2.7
Average Per Set		3	793	0	24	291	1,110	
Total	39	87	21,040	0	711	15,012	36,850	1.4

Note: Test fishing is standardized full purse seine gear, conducting 20 minute sets at Popof Head, Middle Set, and Red Bluff, additional sets are made if time allows.

Appendix B.13. South Unimak and Shumagin Islands commercial sockeye and chum salmon harvests, all gear combined, by day 1999.

Date	South Unimak		Shumagin Islands		Combined	
	Sockeye	Chum	Sockeye	Chum	Sockeye	Chum
June 1-10	Closed to commercial salmon fishing.					
11	53,764	8,906	Closed		53,764	8,906
12	1,901	204	Closed		1,901	204
13	39,268	10,259	26,044	3,582	65,312	13,841
14	79,854	14,408	39,044	6,794	118,898	21,202
15	143,130	14,890	26,407	3,302	169,537	18,192
16	154,153	19,617	76,255	14,447	230,408	34,064
17	158,152	22,382	36,208	8,082	194,360	30,464
18	103,157	16,988	65,233	22,213	168,390	39,201
19	158,791	29,283	Closed		158,791	29,283
20	85,575	16,724	Closed		85,575	16,724
21	128,463	33,225	Closed		128,463	33,225
Total	1,106,208	186,886	269,191	58,420	1,375,399	245,306

Appendix B.14. South Unimak June commercial salmon harvest, all gear combined,
by species and day, 1999.

Catch Date	Number of Salmon							Total
	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum	
11-Jun	126	134	165	53,764	0	33	8,906	63,128
12-Jun	6	6	6	1,901	0	55	204	2,178
13-Jun	106	131	110	39,268	0	11	10,259	49,885
14-Jun	136	159	240	79,854	0	126	14,408	94,923
15-Jun	142	195	162	143,130	0	181	14,890	158,700
16-Jun	149	179	311	154,153	0	1,216	19,617	175,625
17-Jun	165	221	239	158,152	0	444	22,382	181,603
18-Jun	143	158	165	103,157	0	501	16,988	121,112
19-Jun	183	221	366	158,791	0	5,050	29,283	193,894
20-Jun	105	118	283	85,575	1	3,386	16,724	106,192
21-Jun	200	219	211	128,463	0	9,299	33,225	171,617
Total	224	1,741	2,258	1,106,208	1	20,302	186,886	1,318,857

Appendix B.15. South Unimak June commercial purse seine salmon harvest by species and day, 1999.

Catch Date	Number of Salmon							Total
	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum	
11-Jun	19	20	37	5,879	0	29	804	6,749
12-Jun	^a	^a	^a	^a	^a	^a	^a	^a
13-Jun	^a	^a	^a	^a	^a	^a	^a	^a
14-Jun	16	16	73	8,633	0	124	2,141	10,971
15-Jun	6	6	13	3,253	0	121	389	3,776
16-Jun	19	19	150	42,802	0	1,192	5,543	49,687
17-Jun	16	17	37	23,699	0	425	3,309	27,470
18-Jun	13	13	66	21,674	0	499	3,688	25,927
19-Jun	33	33	205	41,509	0	5,025	11,840	58,579
20-Jun	22	23	204	33,636	1	3,343	7,501	44,685
21-Jun	42	42	135	50,661	0	8,975	17,063	76,834
Total	54	191	921	232,779	1	19,788	52,314	305,803

^a Confidentiality requirements prohibit releasing this information.

Appendix B.16. South Unimak June commercial drift gillnet salmon harvest by species and day, 1999.

Catch Date	Permits	Landings	Number of Salmon					Total
			Chinook	Sockeye	Coho	Pink	Chum	
11-Jun	100	106	120	46,366	0	4	7,879	54,369
12-Jun	^a	^a	^a	^a	^a	^a	^a	^a
13-Jun	101	126	104	38,631	0	11	10,216	48,962
14-Jun	112	135	165	70,280	0	2	12,110	82,557
15-Jun	131	183	131	138,894	0	60	14,278	153,363
16-Jun	118	144	148	105,774	0	24	13,321	119,267
17-Jun	139	193	180	130,561	0	19	18,632	149,392
18-Jun	117	131	86	77,118	0	2	12,642	89,848
19-Jun	135	168	133	111,593	0	22	16,418	128,166
20-Jun	70	77	57	45,091	0	38	7,607	52,793
21-Jun	143	159	73	72,019	0	317	15,503	87,912
Total	152	1,423	1,197	836,876	0	499	128,723	967,295

Appendix B.17. South Unimak June commercial set gillnet salmon harvest by species and day, 1999.

Catch Date	Permits	Landings	Number of Salmon					Total
			Chinook	Sockeye	Coho	Pink	Chum	
11-Jun	7	8	8	1,519	0	0	223	1,750
12-Jun	4	4	6	705	0	0	57	768
13-Jun	4	4	5	251	0	0	37	293
14-Jun	8	8	2	941	0	0	157	1,100
15-Jun	5	6	18	983	0	0	223	1,224
16-Jun	12	16	13	5,577	0	0	753	6,343
17-Jun	10	11	22	3,892	0	0	441	4,355
18-Jun	13	14	13	4,365	0	0	658	5,036
19-Jun	15	20	28	5,689	0	3	1,025	6,745
20-Jun	13	18	22	6,848	0	5	1,616	8,491
21-Jun	15	18	3	5,783	0	7	659	6,452
Total	18	127	140	36,553	0	15	5,849	42,557

Appendix B.18. Shumagin Islands Section commercial salmon harvest, all gear combined, by species and day, 1999.

Catch Date	Number of Salmon							Total
	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum	
13-Jun	60	79	72	26,044	0	328	3,582	30,026
14-Jun	58	73	84	39,044	0	282	6,794	46,204
15-Jun	37	52	29	26,407	0	589	3,302	30,327
16-Jun	48	69	216	76,255	1	3,010	14,447	93,929
17-Jun	37	45	146	36,208	0	1,535	8,082	45,971
18-Jun	50	55	246	65,233	0	4,493	22,213	92,185
6-Jul	81	126	209	66,400	579	30,463	18,678	116,329
8-Jul	a	a	a	a	a	a	a	a
9-Jul	74	140	93	90,521	1,874	58,208	13,789	164,485
12-Jul	78	120	128	69,182	3,011	55,317	12,998	140,636
15-Jul	70	114	90	50,947	3,374	46,967	17,667	119,045
18-Jul	71	119	91	54,684	4,397	65,178	12,927	137,277
21-Jul	72	128	94	37,357	4,249	51,666	12,644	106,010
23-Jul	32	41	21	9,616	1,907	19,909	3,255	34,708
24-Jul	65	101	100	34,247	7,346	92,013	12,408	146,114
25-Jul	a	a	a	a	a	a	a	a
27-Jul	31	48	32	15,882	4,719	88,115	6,600	115,348
28-Jul	42	45	81	20,064	9,851	142,936	11,956	184,888
30-Jul	33	41	48	8,620	6,090	89,673	5,118	109,549
31-Jul	48	71	119	34,749	12,896	221,339	17,330	286,433
2-Aug	24	26	16	4,262	1,845	60,201	5,118	71,442
3-Aug	31	38	20	6,222	3,657	103,742	6,588	120,229
4-Aug	37	43	17	18,260	2,868	190,146	8,034	219,325
6-Aug	31	44	18	23,071	6,411	224,770	14,621	268,891
7-Aug	38	57	25	28,569	20,819	301,341	20,460	371,214
9-Aug	35	47	16	8,358	5,480	250,541	9,314	273,709
10-Aug	39	54	16	17,267	9,417	243,161	13,318	283,179
12-Aug	51	69	23	15,888	4,426	304,069	10,228	334,634
13-Aug	47	64	8	6,415	2,034	186,982	5,907	201,346
15-Aug	19	32	12	5,283	2,065	90,336	3,361	101,057
16-Aug	22	37	6	5,965	1,622	133,450	4,008	145,051
17-Aug	27	45	38	9,413	3,165	158,301	4,619	175,536
18-Aug	19	36	17	5,828	1,514	78,502	2,692	88,553
19-Aug	15	26	33	16,862	2,947	77,626	4,086	101,554
20-Aug	18	31	14	13,661	1,802	60,342	3,431	79,250
21-Aug	16	28	9	9,391	3,612	55,459	3,080	71,551
22-Aug	18	37	9	7,789	2,546	32,903	1,866	45,113
23-Aug	16	30	2	9,609	1,127	17,165	1,329	29,232
24-Aug	a	a	a	a	a	a	a	a
25-Aug	a	a	a	a	a	a	a	a
1-Sep	9	10	2	1,568	670	1,368	317	3,925

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Appendix B.18. (page 2 of 2)

Catch Date	Number of Salmon							Total
	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum	
2-Sep	10	14	1	3,373	882	1,498	391	6,145
3-Sep	12	18	0	3,384	1,279	1,822	345	6,830
6-Sep	9	13	0	806	509	259	98	1,672
7-Sep	12	17	1	1,434	700	331	112	2,578
8-Sep	10	11	0	1,056	380	136	121	1,693
13-Sep	8	11	0	1,348	226	24	48	1,646
14-Sep	6	9	1	923	171	9	47	1,151
15-Sep	5	9	0	1,243	221	2	80	1,546
20-Sep	a	a	a	a	a	a	a	a
21-Sep	a	a	a	a	a	a	a	a
22-Sep	a	a	a	a	a	a	a	a
23-Sep	a	a	a	a	a	a	a	a
27-Sep	a	a	a	a	a	a	a	a
28-Sep	a	a	a	a	a	a	a	a
Year								
Total	107	2,333	2,203	993,969	143,245	3,556,954	328,262	5,024,633
June								
Total	86	373	793	269,191	1	10,237	58,420	338,642

^a Confidentiality requirements prohibit releasing this information.

Appendix B.19. Shumagin Islands Section commercial purse seine salmon harvest by species and day, 1999.

Date	Permits	Landings	Number of Salmon					Total
			Chinook	Sockeye	Coho	Pink	Chum	
13-Jun	19	19	50	15,259	0	327	2,945	18,581
14-Jun	20	20	59	24,302	0	282	5,562	30,205
15-Jun	14	14	19	13,986	0	589	2,642	17,236
16-Jun	26	26	197	62,540	0	3,010	13,619	79,366
17-Jun	16	16	132	26,128	0	1,535	7,756	35,551
18-Jun	31	31	242	57,893	0	4,493	21,915	84,543
6-Jul	28	29	176	37,396	311	29,178	14,165	81,226
9-Jul	27	28	77	61,901	1,331	57,614	10,980	131,903
12-Jul	32	32	117	45,712	2,250	54,269	10,958	113,306
15-Jul	24	25	65	24,979	2,625	45,047	15,238	87,954
18-Jul	22	23	72	31,137	3,674	61,336	10,058	106,277
21-Jul	25	25	81	14,577	2,997	45,644	8,212	71,511
23-Jul	8	8	19	3,917	1,787	18,167	2,393	26,283
24-Jul	28	28	92	19,250	6,340	83,666	10,070	119,418
25-Jul	^a	^a	^a	^a	^a	^a	^a	^a
27-Jul	14	15	30	5,328	4,253	83,621	4,802	98,034
28-Jul	26	27	79	14,775	9,726	139,811	11,487	175,878
30-Jul	15	17	46	3,238	5,591	85,287	3,656	97,818
31-Jul	29	29	116	24,789	12,470	214,127	15,561	267,063
2-Aug	11	11	16	1,735	1,635	57,379	4,135	64,900
3-Aug	13	13	19	2,992	3,370	98,775	5,312	110,468
4-Aug	23	23	17	14,304	2,591	185,304	6,933	209,149
6-Aug	17	17	17	17,125	6,112	217,080	11,657	251,991
7-Aug	26	28	25	21,149	20,646	292,896	18,305	353,021
9-Aug	22	25	16	5,761	5,223	245,276	7,995	264,271
10-Aug	24	24	16	11,767	9,195	230,190	11,680	262,848
12-Aug	28	28	22	10,808	4,095	291,484	7,435	313,844
13-Aug	27	28	8	2,144	1,790	177,719	4,409	186,070
15-Aug	7	8	11	1,967	1,821	84,292	2,181	90,272
16-Aug	6	6	5	1,806	1,370	126,432	2,927	132,540
17-Aug	12	13	37	5,221	2,950	151,320	3,654	163,182
18-Aug	7	7	15	2,275	1,332	73,109	1,698	78,429
19-Aug	5	5	33	12,799	2,777	71,148	3,035	89,792
20-Aug	6	6	14	8,891	1,423	54,436	2,098	66,862
21-Aug	5	6	9	4,795	3,210	49,744	2,032	59,790
22-Aug	4	4	9	1,967	1,915	25,200	727	29,818
23-Aug	3	3	0	4,398	591	12,939	549	18,477
24-Aug	^a	^a	^a	^a	^a	^a	^a	^a
25-Aug	^a	^a	^a	^a	^a	^a	^a	^a
3-Sep	^a	^a	^a	^a	^a	^a	^a	^a
7-Sep	^a	^a	^a	^a	^a	^a	^a	^a
Total	47	672	1,958	622,630	126,103	3,383,706	269,564	4,403,961
June Total	37	126	699	200,108	0	10,236	54,439	265,482

^a Confidentiality prohibits releasing this information.

Appendix B.20. Shumagin Islands Section commercial set gillnet salmon harvest by species and day, 1999.

Date	Permits	Landings	Number of Salmon					Total
			Chinook	Sockeye	Coho	Pink	Chum	
13-Jun	41	60	22	10,785	0	1	637	11,445
14-Jun	38	53	25	14,742	0	0	1,232	15,999
15-Jun	23	38	10	12,421	0	0	660	13,091
16-Jun	22	43	19	13,715	1	0	828	14,563
17-Jun	21	29	14	10,080	0	0	326	10,420
18-Jun	19	24	4	7,340	0	0	298	7,642
6-Jul	53	97	33	29,004	268	1,285	4,513	35,103
8-Jul	a	a	a	a	a	a	a	a
9-Jul	47	112	16	28,620	543	594	2,809	32,582
12-Jul	46	88	11	23,470	761	1,048	2,040	27,330
15-Jul	46	89	25	25,968	749	1,920	2,429	31,091
18-Jul	49	96	19	23,547	723	3,842	2,869	31,000
21-Jul	47	103	13	22,780	1,252	6,022	4,432	34,499
23-Jul	24	33	2	5,699	120	1,742	862	8,425
24-Jul	37	73	8	14,997	1,006	8,347	2,338	26,696
27-Jul	17	33	2	10,554	466	4,494	1,798	17,314
28-Jul	16	18	2	5,289	125	3,125	469	9,010
30-Jul	18	24	2	5,382	499	4,386	1,462	11,731
31-Jul	19	42	3	9,960	426	7,212	1,769	19,370
2-Aug	13	15	0	2,527	210	2,822	983	6,542
3-Aug	18	25	1	3,230	287	4,967	1,276	9,761
4-Aug	14	20	0	3,956	277	4,842	1,101	10,176
6-Aug	14	27	1	5,946	299	7,690	2,964	16,900
7-Aug	12	29	0	7,420	173	8,445	2,155	18,193
9-Aug	13	22	0	2,597	257	5,265	1,319	9,438
10-Aug	15	30	0	5,500	222	12,971	1,638	20,331
12-Aug	23	41	1	5,080	331	12,585	2,793	20,790
13-Aug	20	36	0	4,271	244	9,263	1,498	15,276
15-Aug	12	24	1	3,316	244	6,044	1,180	10,785
16-Aug	16	31	1	4,159	252	7,018	1,081	12,511
17-Aug	15	32	1	4,192	215	6,981	965	12,354
18-Aug	12	29	2	3,553	182	5,393	994	10,124
19-Aug	10	21	0	4,063	170	6,478	1,051	11,762
20-Aug	12	25	0	4,770	379	5,906	1,333	12,388
21-Aug	11	22	0	4,596	402	5,715	1,048	11,761
22-Aug	14	33	0	5,822	631	7,703	1,139	15,295
23-Aug	13	27	2	5,211	536	4,226	780	10,755
1-Sep	9	10	2	1,568	670	1,368	317	3,925

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Appendix B.20. (page 2 of 2)

Date	Permits	Landings	Number of Salmon					Total
			Chinook	Sockeye	Coho	Pink	Chum	
2-Sep	10	14	1	3,373	882	1,498	391	6,145
3-Sep	11	17	0	3134	773	1319	345	5,571
6-Sep	9	13	0	806	509	259	98	1,672
7-Sep	11	16	1	1364	686	295	112	2,458
8-Sep	10	11	0	1056	380	136	121	1,693
13-Sep	8	11	0	1348	226	24	48	1,646
14-Sep	6	9	1	923	171	9	47	1,151
15-Sep	5	9	0	1243	221	2	80	1,546
20-Sep	a	a	a	a	a	a	a	a
21-Sep	a	a	a	a	a	a	a	a
22-Sep	a	a	a	a	a	a	a	a
23-Sep	a	a	a	a	a	a	a	a
27-Sep	a	a	a	a	a	a	a	a
28-Sep	a	a	a	a	a	a	a	a
Total	60	1,661	245	371,339	17,142	173,248	58,698	620,672
June Total	49	247	94	69,083	1	1	3,981	73,160

^a Confidentiality requirements prohibit releasing this information.

Appendix B.21. South Unimak and Shumagin Islands June fisheries commercial sockeye and chum salmon harvests in percent by gear type and year, 1970-99^a.

Year	South Unimak						Shumagin Islands			
	Sockeye			Chum			Sockeye		Chum	
	Purse Seine	Drift Gillnet	Set Gillnet	Purse Seine	Drift Gillnet	Set Gillnet	Purse Seine	Set Gillnet	Purse Seine	Set Gillnet
1970	47.5	52.0	0.5	31.8	68	0.2	92.0	8.0	94.1	5.9
1971	25.3	74.7	0.0	19.5	80.5	0.0	89.4	10.6	96.8	3.2
1972	12.5	87.5	0.0	9.3	90.7	0.0	96.9	3.1	98.5	1.5
1973	9.6	90	0.4	6.6	93.3	0.1	87.3	12.7	94.3	5.7
1974	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	22.9	77.0	0.1	28.9	71.1	0.0	97.5	2.5	97.4	2.6
1976	17.3	81.6	1.1	14.2	85.7	0.1	95.5	4.5	97.1	2.9
1977	15.2	83.9	0.9	10.5	89.2	0.3	94.9	5.1	99.0	1.0
1978	18.4	81.0	0.6	9.9	90.0	0.1	97.0	3.0	96.3	3.7
1979	70.6	29.2	0.2	30.1	69.8	0.2	92.4	7.6	95.7	4.3
1980	76.4	23.1	0.5	79.2	20.7	0.1	96.4	3.6	97.3	2.7
1981	50.7	47.1	2.2	63.5	36.2	0.3	94.8	5.2	98.7	1.3
1982	54.1	44.7	1.2	46.1	53.7	0.2	97.3	2.7	98.9	1.1
1983	60.4	38.7	0.9	65.8	34.0	0.1	97.4	2.6	99.6	0.4
1984	63.3	35.7	1.0	60.2	39.7	0.1	94.7	5.3	99.3	0.7
1985	61.3	38.0	0.7	38.7	61.1	0.2	94.8	5.2	96.0	4.0
1986	46.7	51.7	1.6	43.8	55.9	0.3	85.0	15.0	95.0	5.0
1987	36.5	61.4	2.2	38.3	61.1	0.7	76.0	24.0	93.4	6.6
1988	29.8	67.0	3.2	33.5	65.8	0.6	72.1	27.9	82.6	17.4
1989	59.4	38.0	2.5	52.1	47.3	0.7	90.9	9.1	93.6	6.4
1990	56.8	41.5	1.7	57.9	41.7	0.4	85.3	14.7	93.1	6.9
1991	53.5	44.4	2.1	61.2	38.2	0.6	80.6	19.4	93.3	6.7
1992	58.3	37.4	4.3	63.2	35.6	1.2	90.9	9.1	96.3	3.7
1993	59.1	38.1	2.8	66.2	31.6	2.2	87.5	12.5	97.9	2.1
1994	57.3	37.1	5.7	63.9	34.6	1.5	75.4	24.6	96.5	3.5
1995	42.1	54.6	3.3	47.1	50.5	2.4	81.5	18.5	93.7	6.3
1996	22.2	73.7	4.1	32.0	66.3	1.7	75.0	25.0	95.9	4.1
1997	14.8	76.0	9.2	30.1	65.1	4.8	75.5	24.5	93.8	6.2
1998	7.2	87.9	4.9	13.7	83.2	3.1	49.4	50.6	78.7	21.3
1999	21.0	75.7	3.3	28.0	68.9	3.1	74.3	25.7	93.2	6.8
1970-79 Average	23.9	65.7	0.4	16.1	73.8	0.1	84.3	5.7	86.9	3.1
1980-89 Average	53.9	44.5	1.6	52.1	47.6	0.3	89.9	10.1	95.4	4.6
1990-98 Average	41.3	54.5	4.2	48.4	49.6	2.0	77.9	22.1	93.2	6.8

^a Gear depth limitations in effect beginning in 1990.

Appendix B.22. South Unimak and Shumagin Islands June fisheries combined commercial sockeye salmon harvests in percent by gear type and year, 1970-99^a.

Year	Purse Seine		Drift Gillnet		Set Gillnet		Total
	Number	Percent	Number	Percent	Number	Percent	
1970	845,597	51.2	785,174	47.6	19,363	1.2	1,650,134
1971	142,251	30.8	315,685	68.3	4,165	0.9	462,101
1972	125,242	25.0	373,618	74.5	2,337	0.5	501,197
1973	41,411	16.9	200,258	81.6	3,881	1.6	245,550
1974	0	0.0	0	0.0	0	0.0	0
1975	91,768	38.2	146,937	61.2	1,394	0.6	240,099
1976	109,089	35.7	190,256	62.3	5,882	1.9	305,227
1977	73,277	30.3	164,165	68.0	4,150	1.7	241,592
1978	143,047	29.4	339,295	69.7	4,493	0.9	486,835
1979	639,986	75.2	196,482	23.1	14,964	1.8	851,432
1980	2,544,107	79.3	631,975	19.7	30,193	0.9	3,206,275
1981	1,078,047	59.2	693,166	38.1	49,922	2.7	1,821,135
1982	1,341,224	63.3	745,616	35.2	31,861	1.5	2,118,701
1983	1,339,868	68.3	599,152	30.5	23,951	1.2	1,962,971
1984	959,821	69.1	403,582	29.1	24,800	1.8	1,388,203
1985	1,210,653	67.6	553,558	30.9	27,189	1.5	1,791,400
1986	279,960	59.4	162,950	34.6	28,487	6.0	471,397
1987	345,028	43.4	401,215	50.5	47,860	6.0	794,103
1988	344,801	45.6	317,818	42.0	94,068	12.4	756,687
1989	1,161,809	66.6	512,522	29.4	70,174	4.0	1,744,505
1990	837,635	62.2	452,484	33.6	56,176	4.2	1,346,295
1991	919,000	59.3	539,490	34.8	90,440	5.8	1,548,930
1992	1,566,460	63.7	765,752	31.2	125,644	5.1	2,457,856
1993	1,928,739	64.9	902,788	30.4	142,217	4.8	2,973,744
1994	920,170	63.0	371,103	25.4	169,990	11.6	1,461,263
1995	1,144,405	54.4	792,940	37.7	167,976	8.0	2,105,321
1996	469,683	45.6	421,882	41.0	137,405	13.4	1,028,970
1997	513,339	31.5	896,638	55.1	218,204	13.4	1,628,181
1998	225,479	17.5	856,265	66.4	206,981	16.1	1,288,725
1999	432,887	31.5	836,876	60.8	105,636	7.7	1,375,399
1979-98 Average							
	988,511	60.4	560,869	34.3	87,925	5.4	1,637,305
1989-98 Average							
	968,672	55.1	651,186	37.0	138,521	7.9	1,758,379

^a Gear depth limitations in effect beginning in 1990.

Appendix B.23. South Unimak and Shumagin Islands June fisheries commercial chum salmon harvests by gear type and year, 1970-99 .

Year	Purse Seine ^a		Drift Gillnet		Set Gillnet		Total
	Number	Percent	Number	Percent	Number	Percent	
1970	168,520	38.1	269,844	61.1	3,548	0.8	441,912
1971	179,588	35.3	326,267	64.1	3,342	0.7	509,197
1972	144,604	27.9	372,635	71.8	1,590	0.3	518,829
1973	33,351	16.6	165,753	82.6	1,526	0.8	200,630
1974	0	0.0	0	0.0	0	0.0	0
1975	53,447	53.0	46,447	46.1	928	0.9	100,822
1976	119,569	29.1	288,300	70.3	2,478	0.6	410,347
1977	31,530	27.2	84,052	72.4	532	0.5	116,114
1978	28,003	23.0	93,115	76.4	790	0.6	121,908
1979	58,203	55.9	44,051	42.3	1,852	1.8	104,106
1980	412,350	81.0	94,900	18.6	1,615	0.3	508,865
1981	377,168	66.9	184,586	32.7	2,228	0.4	563,982
1982	590,179	53.9	501,282	45.8	3,583	0.3	1,095,044
1983	574,300	73.1	209,600	26.7	1,546	0.2	785,446
1984	245,605	72.9	90,498	26.8	1,017	0.3	337,120
1985	230,432	53.1	198,361	45.7	5,036	1.2	433,829
1986	204,746	58.2	141,299	40.2	5,724	1.6	351,769
1987	190,064	42.9	247,934	55.9	5,143	1.2	443,141
1988	207,049	39.3	305,967	58.1	13,695	2.6	526,711
1989	256,808	56.4	192,650	42.3	5,705	1.3	455,163
1990	322,701	62.2	190,002	36.6	6,036	1.2	518,739
1991	505,790	65.5	256,132	33.1	10,783	1.4	772,705
1992	303,226	71.1	115,401	27.1	7,576	1.8	426,203
1993	399,958	75.1	120,820	22.7	11,469	2.2	532,247
1994	439,863	75.6	129,530	22.2	12,772	2.2	582,165
1995	344,093	64.0	172,715	32.1	20,625	3.8	537,433
1996	261,965	72.8	86,103	23.9	11,752	3.3	359,820
1997	177,417	55.0	127,646	39.6	17,262	5.4	322,325
1998	66,241	27.0	162,566	66.2	16,812	6.8	245,619
1999	106,753	43.5	128,723	52.5	9,830	4.0	245,306
1979-98 Average							
	308,408	62.3	178,602	36.1	8,112	1.6	495,122
1987-98 Average							
	307,806	62.5	155,357	34.6	12,079	2.9	475,242

Appendix B.24. South Unimak and Shumagin Islands June commercial fisheries sockeye to chum salmon ratios, all gear combined, by location and year, 1960-99. ^a

Year	South Unimak			Shumagin Islands			Total		
	Sockeye	Chum	Ratio	Sockeye	Chum	Ratio	Sockeye	Chum	Ratio
1960	137,000	84,000	1.63	19,000	11,000	1.73	156,000	95,000	1.64
1961	199,000	157,000	1.27	55,000	36,000	1.53	254,000	193,000	1.32
1962	272,000	209,000	1.30	54,000	61,000	0.89	326,000	270,000	1.21
1963	116,000	36,000	3.22	33,000	36,000	0.92	149,000	72,000	2.07
1964	159,000	161,000	0.99	85,000	67,000	1.27	244,000	228,000	1.07
1965	568,000	121,000	4.69	207,000	45,000	4.60	775,000	166,000	4.67
1966	528,000	215,000	2.46	54,000	17,000	3.18	582,000	232,000	2.51
1967	186,000	73,000	2.55	69,000	51,000	1.35	255,000	124,000	2.06
1968	342,000	115,000	2.97	233,000	51,000	4.57	575,000	166,000	3.46
1969	781,000	254,000	3.07	76,000	13,000	5.85	857,000	267,000	3.21
1970	1,510,399	397,003	3.80	139,543	44,896	3.11	1,649,942	441,899	3.73
1971	422,760	405,311	1.04	39,341	103,886	0.38	462,101	509,197	0.91
1972	426,799	411,019	1.04	74,398	107,810	0.69	501,197	518,829	0.97
1973	222,586	177,720	1.25	22,964	22,910	1.00	245,550	200,630	1.22
1974	0	0		0	0		0	0	
1975	190,774	65,279	2.92	49,306	35,542	1.39	240,080	100,821	2.38
1976	233,211	336,238	0.69	72,016	74,109	0.97	305,227	410,347	0.74
1977	195,680	94,215	2.08	45,912	21,899	2.10	241,592	116,114	2.08
1978	418,959	103,429	4.05	67,876	18,479	3.67	486,835	121,908	3.99
1979	672,293	63,153	10.65	179,139	40,953	4.37	851,432	104,106	8.18
1980	2,731,148	458,499	5.96	475,127	50,366	9.43	3,206,275	508,865	6.30
1981	1,470,563	509,911	2.88	350,572	54,071	6.48	1,821,135	563,982	3.23
1982	1,668,153	933,728	1.79	439,230	164,975	2.66	2,107,383	1,098,703	1.92
1983	1,547,369	616,390	2.51	416,494	169,277	2.46	1,963,863	785,667	2.50
1984	1,131,365	227,913	4.96	256,838	109,207	2.35	1,388,203	337,120	4.12
1985	1,454,969	324,825	4.48	336,431	109,004	3.09	1,791,400	433,829	4.13
1986	315,370	252,721	1.25	156,027	99,048	1.58	471,397	351,769	1.34
1987	653,536	406,077	1.61	140,567	37,064	3.79	794,103	443,141	1.79
1988	474,457	464,765	1.02	282,230	61,946	4.56	756,687	526,711	1.44
1989	1,347,547	407,635	3.31	396,958	47,528	8.35	1,744,505	455,163	3.83
1990	1,090,710	455,238	2.40	255,585	63,501	4.02	1,346,295	518,739	2.60
1991	1,216,035	670,409	1.81	333,272	102,602	3.25	1,549,307	773,011	2.00
1992	2,046,022	323,891	6.32	411,834	102,312	4.03	2,457,856	426,203	5.77
1993	2,366,573	381,941	6.20	607,171	150,306	4.04	2,973,744	532,247	5.59
1994	1,001,250	374,409	2.67	460,013	207,756	2.21	1,461,263	582,165	2.51
1995	1,451,490	342,307	4.24	653,831	195,126	3.35	2,105,321	537,433	3.92
1996	572,495	129,889	4.41	456,475	229,931	1.99	1,028,970	359,820	2.86
1997	1,179,179	196,016	6.02	449,002	126,309	3.55	1,628,181	322,325	5.05
1998	974,628	195,454	4.99	314,097	50,165	6.26	1,288,725	245,619	5.25
1999	1,106,208	186,886	5.92	269,191	58,420	4.61	1,375,399	245,306	5.61
1979-98 Average	1,268,258	386,759	3.28	368,545	108,572	3.39	1,636,802	495,331	3.30
1989-98 Average	1,324,593	347,719	3.81	433,824	127,554	3.40	1,758,417	475,273	3.70

^a Gear depth limitations in effect beginning in 1990.

Appendix B.25. South Unimak and Shumagin Islands June commercial fisheries combined sockeye to chum salmon ratios by location, gear type, and year, 1970-99^a.

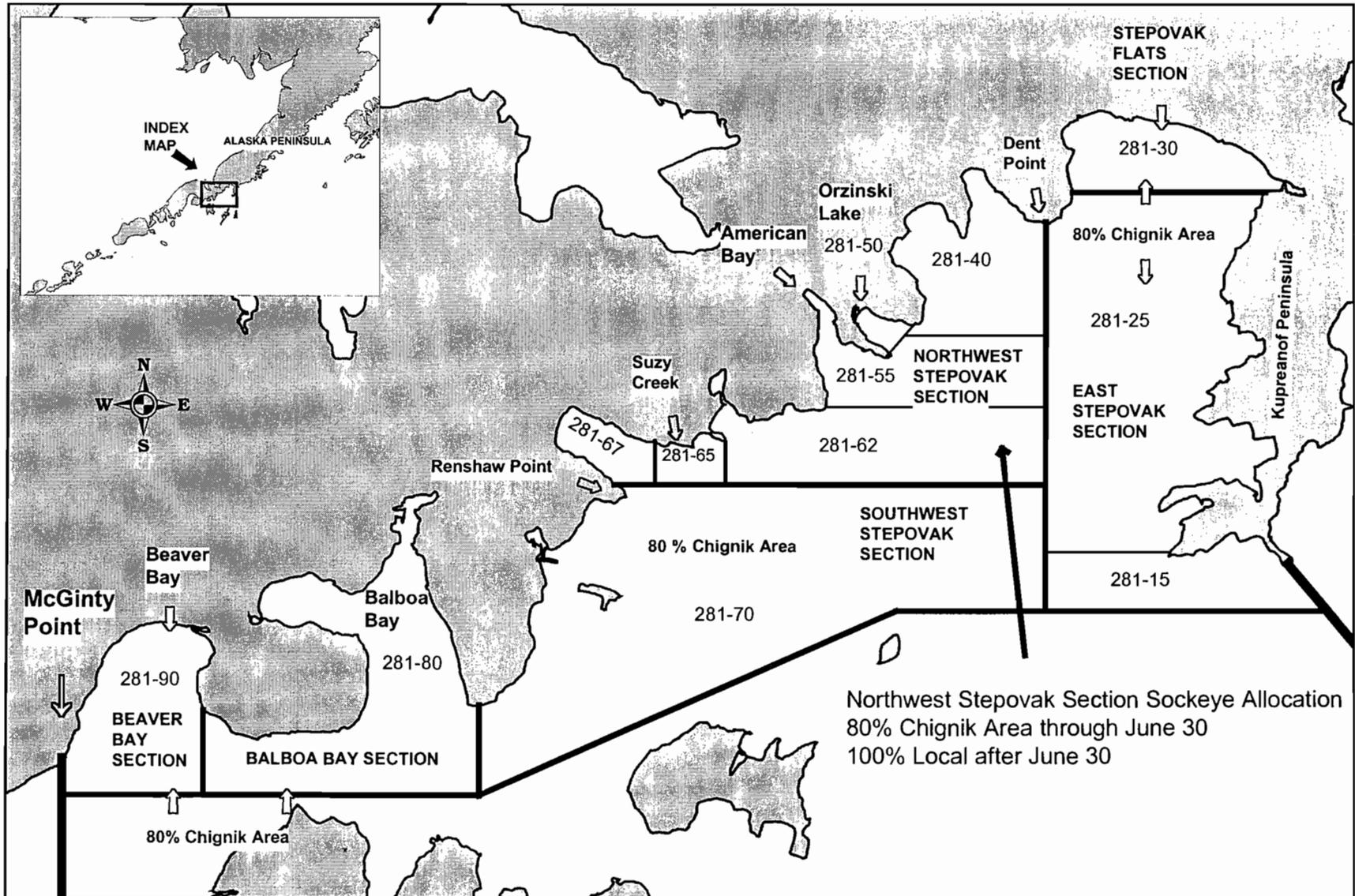
Year	South Unimak				Shumagin Islands		
	Purse Seine	Drift Gillnet	Set Gillnet	Total	Purse Seine	Set Gillnet	Total
1970	5.7	2.9	9.4	3.8	3	4.2	3.1
1971	1.4	1	0	1	0.3	0	0.4
1972	1.4	1	0.4	1	0.7	1.5	0.7
1973	1.8	1.2	4.4	1.3	0.9	2.2	1
1974	0	0	0	0	0	0	0
1975	2.3	3.2	0	2.9	1.4	0	1.4
1976	0.8	0.7	8.3	0.7	1	1.5	1
1977	3	2	5.8	2.1	2	10.6	2.1
1978	7.6	3.6	23.5	4.1	3.7	3	3.7
1979	25	4.5	15.1	10.6	4.2	7.7	4.4
1980	5.7	6.7	55	6	9.4	12.4	9.4
1981	2.3	3.8	21	2.9	6.2	25.4	6.5
1982	2.1	1.5	11.1	1.8	2.7	6.7	2.8
1983	2.3	2.9	14.9	2.5	2.4	16.3	2.5
1984	5.2	4.5	36.4	5	2.2	19.2	2.4
1985	7.1	2.8	14.8	4.5	3	4	3.1
1986	1.3	1.2	6.7	1.2	1.4	4.7	1.6
1987	1.5	1.6	5.2	1.6	3.1	13.8	3.8
1988	0.9	1	5.2	1	4	7.3	4.6
1989	3.8	2.7	12.7	3.3	8.1	11.9	8.4
1990	2.4	2.4	11.3	2.4	3.7	8.6	4
1991	1.6	2.1	6.5	1.8	2.8	9.5	3.2
1992	5.8	6.6	23.3	6.3	3.8	9.9	4
1993	5.5	7.5	8	6.2	3.6	24.1	4
1994	2.4	2.9	10.2	2.7	1.7	15.8	2.2
1995	3.8	4.6	5.6	4.2	2.9	9.9	3.4
1996	3.1	4.9	10.2	4.4	1.6	12	2
1997	3.0	7.0	11.5	6.0	2.9	14.0	3.6
1998	2.6	5.3	7.9	5.0	3.9	14.8	6.3
1999	4.4	6.5	6.2	5.9	3.7	17.4	4.6
1979-98 Average							
	4.4	3.8	14.6	4.0	3.7	12.4	4.1
1989-98 Average							
	3.4	4.6	10.7	4.2	3.5	13.1	4.1

^a Gear depth limitations in effect beginning in 1990.

Appendix B.26. Number and type of commercial salmon gear in the South Unimak and Shumagin Islands Section waters combined during June, by year, 1970-99^a.

Year	Gear			Total
	Purse Seine	Drift Gillnet	Set Gillnet	
1970	39	156	16	211
1971	37	122	8	167
1972	32	150	7	189
1973	16	121	7	144
1974	0	0	0	0
1975	20	81	8	109
1976	25	108	16	149
1977	17	101	13	131
1978	23	120	16	159
1979	40	132	26	198
1980	68	129	29	226
1981	83	135	25	243
1982	90	138	23	251
1983	100	146	35	281
1984	101	147	32	280
1985	107	150	48	305
1986	99	156	43	298
1987	86	144	60	290
1988	90	148	63	301
1989	99	145	61	305
1990	109	153	59	321
1991	112	157	65	334
1992	112	141	68	321
1993	116	140	72	328
1994	114	145	65	324
1995	112	151	68	331
1996	99	147	67	313
1997	81	142	69	292
1998	64	145	74	283
1999	61	152	64	277
1979-98 Average	94.1	144.6	52.6	291.3
1989-98 Average	101.8	146.6	66.8	315.2

^a During the peak of the South Peninsula June fishery, (June 12-26), approximately 50 purse seine permit holders fish the Shumagin Islands Section fishery. During the occasions when the South Unimak fishery is open and the Shumagin Islands fishery is closed, nearly the entire purse seine fleet fishes at South Unimak. Drift gillnet effort declines after June 20 as the fleet begins moving to the Port Moller fishery.



Appendix C.1. Map of the Southeastern District Mainland fishery from Kupreanof Point to McGinty Point with the salmon sections defined.

Appendix C.2. History of regulations for the Southeastern District Mainland commercial salmon fishery, 1970-99.

Year	Management Plan
Pre-1974	Set weekly fishing periods, usually 5 days per week
1974-77	Day for day fishing with Chignik
1978	3 days per week, seine gear prohibited before July 10
1979-84	5 days per week, 60,000 catch ceiling (until Chignik catches 1 million)
1985-91	Assures minimum harvest in Chignik of 600,000, restricts fishing in S during overlap period (6/26-7/9), allows 6% (6.2%-1985-88) allocation Chignik sockeye harvest through 7/25, permits openings in Stepovak and Northwest Stepovak Sections based on local runs
1992-95	Area managed on local sockeye runs reduced to include only Orzinski (Stepovak Flats Section not effected), increased allocation of Chignik sockeye harvest from 6% to 7%
1996-97	Area managed on local sockeye runs increased to include the Northw Stepovak Section beginning July 1, reduced allocation of Chignik soc harvest from 7% to 6%
1998-Present	Beginning July 1, only Orzinski Bay will be managed entirely on its loc sockeye salmon run. However, all sockeye salmon caught in the Nort Stepovak Section beginning July 1 will be considered 100% local fish not counted toward the 6% allocation. Remainder of SEDM sockeye harvest allocated as 80% Chignik bound fish. Assures minimum harv 600,000 sockeye salmon in Chignik.

Appendix C.3. Southeastern District Mainland commercial sockeye
salmon harvest by gear, through July 25, 1970-99.^a

Year	Catch by Gear				Total Catch
	Set Net		Purse Seine		
	Number	Percent	Number	Percent	
1970	80,692	95.4	3,904	4.6	84,596
1971	60,767	95.9	2,587	4.1	63,354
1972	19,491	92.4	1,614	7.6	21,105
1973	46,141	97.9	976	2.1	47,117
1974	66,101	74.9	22,129	25.1	88,230
1975	1,807	57.3	1,349	42.7	3,156
1976	52,414	90.2	5,712	9.8	58,126
1977	30,658	70.5	12,827	29.5	43,485
1978	28,930	92.7	2,267	7.3	31,197
1979	77,604	87.5	11,136	12.5	88,740
1980	89,743	93.0	6,729	7.0	96,472
1981	181,698	90.1	20,013	9.9	201,711
1982	79,442	91.5	7,351	8.5	86,793
1983	213,051	71.0	87,107	29.0	300,158
1984	567,043	95.3	28,000	4.7	595,043
1985	78,347	96.8	2,610	3.2	80,957
1986	196,545	95.2	9,987	4.8	206,532
1987	244,413	99.8	482	0.2	244,895
1988	77,204	95.1	3,956	4.9	81,160
1989	46,977	52.7	42,247	47.3	89,224
1990	85,368	52.0	78,660	48.0	164,028
1991	275,768	95.2	13,959	4.8	289,727
1992	214,638	99.6	806	0.4	215,444
1993	186,656	88.5	24,271	11.5	210,927
1994	221,657	100.0	0	0.0	221,657
1995	139,515	87.5	19,866	12.5	159,381
1996	276,212	97.2	7,864	2.8	284,076
1997	293,750	96.4	11,115	3.6	304,865
1998	74,069	63.2	43,062	36.8	117,131
1999	205,706	94.8	11,320	5.2	217,026
Average 1979-98	180,985	89.6	20,961	10.4	201,946
Average 1989-98	181,461	88.2	24,185	11.8	205,646

^a Only set gillnet gear is allowed prior to July 11 since 1978 season.

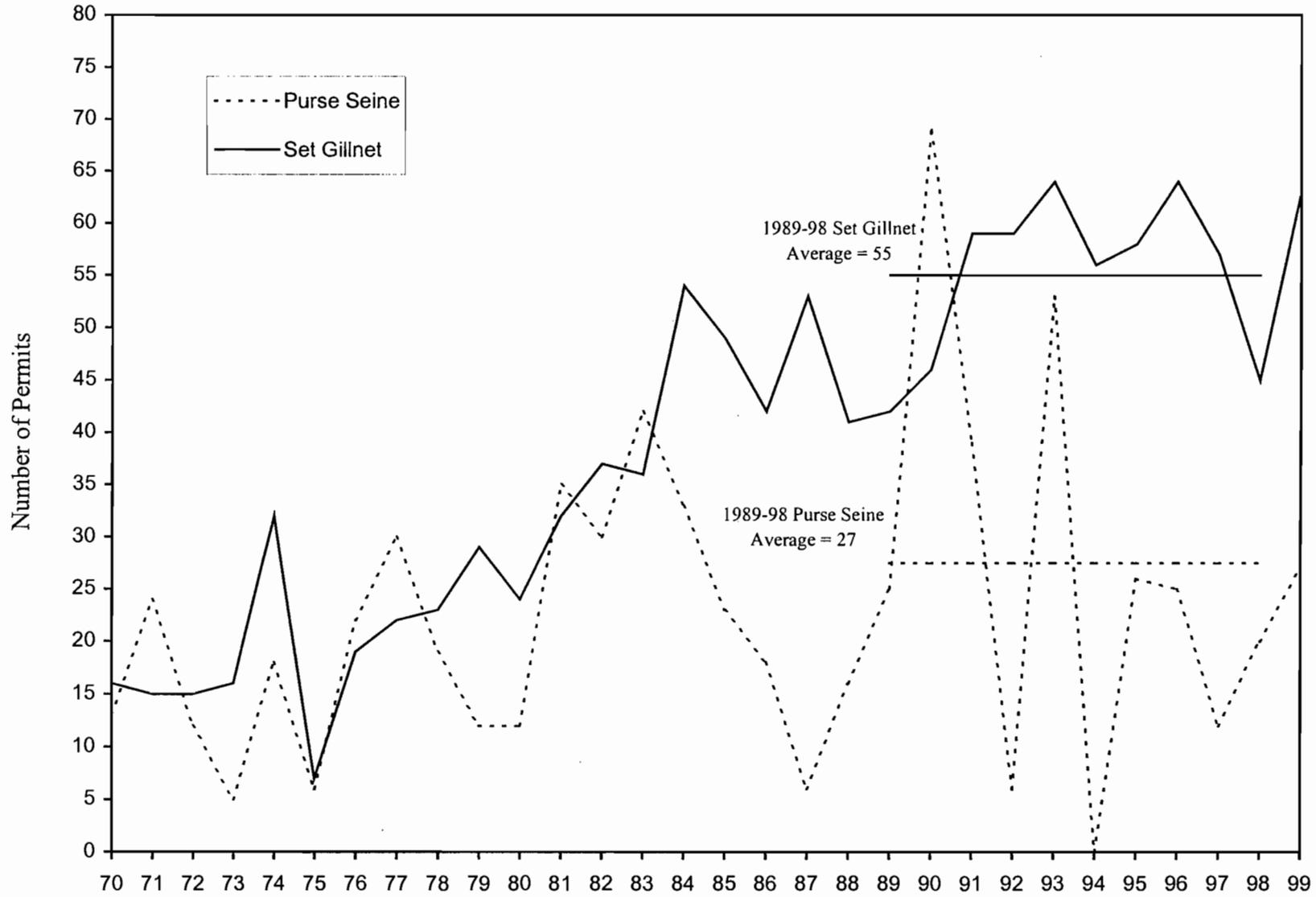
Appendix C.4. Harvest of sockeye salmon considered to be Chignik bound by regulation in the Southeastern District Mainland, by gear, through July 25, 1970-99.

Year		Catch by Gear				Total Catch
		Set Net		Purse Seine		
		Number	Percent	Number	Percent	
1970	^a	63,688	94.2	3,894	5.8	67,582
1971	^a	48,575	95.9	2,066	4.1	50,641
1972	^a	15,593	92.4	1,291	7.6	16,884
1973	^a	37,240	98.0	743	2.0	37,983
1974	^a	56,263	82.7	11,766	17.3	68,029
1975	^a	1,126	51.1	1,079	48.9	2,205
1976	^a	41,764	93.4	2,966	6.6	44,730
1977	^a	26,473	74.6	9,029	25.4	35,502
1978	^a	20,286	91.9	1,778	8.1	22,064
1979	^a	52,065	91.5	4,813 ^e	8.5	56,878
1980	^a	58,210	91.3	5,514	8.7	63,724
1981	^a	107,474	87.7	15,059	12.3	122,533
1982	^a	57,646	91.8	5,121	8.2	62,767
1983	^a	157,831	69.4	69,561	30.6	227,392
1984	^a	404,738	95.7	18,330	4.3	423,068
1985	^a	49,523	96.3	1,898	3.7	51,421
1986	^a	110,572	93.7	7,434	6.3	118,006
1987	^a	146,636	99.8	250	0.2	146,886
1988	^a	16,465	85.2	2,855	14.8	19,320
1989	^a	4,371	97.5	114	2.5	4,485
1990	^a	65,671	51.1	62,928	48.9	128,599
1991	^a	152,454	99.8	260	0.2	152,714
1992	^b	93,564	99.7	281	0.3	93,845
1993	^b	109,119	84.9	19,417	15.1	128,536
1994	^b	142,350	100.0	0	0.0	142,350
1995	^b	73,864	83.6	14,438	16.4	88,302
1996	^c	123,625	97.2	3,576	2.8	127,201
1997	^c	0	0.0	0	0.0	0
1998	^d	32,455	48.5	34,438	51.5	66,893
1999	^d	164,565	94.8	9,056	5.2	173,621
Average 1979-98		97,932	83.2	13,314	11.8	111,246
Average 1989-98		79,747	76.2	13,545	14.5	93,293

^a From 1970-91, the Chignik contribution is 80% of the sockeye salmon harvested in Beaver Bay, Balboa Bay, Southwest Stepovak, Stepovak Flats, and East Stepovak Sections.

-Continued-

- ^b From 1992-95, the Chignik contribution is 80% of the sockeye salmon harvested in the Southeastern District Mainland fishery except Orzinski Bay where 100% of the sockeye salmon are considered local production.
- ^c During their January 1996 meeting, the BOF increased the area to be managed for local Orzinski Lake sockeye salmon from only Orzinski Bay to the entire Northwest Stepovak Section. Prior to July 1, the entire Northwest Stepovak Section will be managed on an allocation based on the strength of the Chignik sockeye salmon runs. Beginning July 1, the Northwest Stepovak Section will be managed entirely on local stocks. The BOF also decreased the percentage of sockeye salmon allocated to the SEDM fishery from 7% to 6% to attempt to maintain traditional harvest levels of Chignik bound sockeye in the SEDM fishery.
- ^d During their January 1998 meeting, the BOF reduced the area managed entirely for local Orzinski Lake sockeye salmon from the entire Northwest Stepovak Section to only Orzinski Bay. All sockeye salmon caught in the Northwest Stepovak Section beginning July 1 will still be considered 100% local fish and not counted toward the 6% allocation. Remainder of SEDM sockeye salmon harvest allocated as 80% Chignik bound fish. Assures minimum harvest of 600,000 sockeye salmon in Chignik through July 25.
- ^e Includes 54 sockeye salmon initially reported as a drift gillnet landing and reassigned as a purse seine landing.
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Appendix C.5. Southeastern District Mainland CFEC permits fished by gear through July 25, 1970-99.

Appendix C.6. Harvest of sockeye salmon considered to be Chignik bound by regulation in the Chignik, Cape Igvak, and Southeastern District Mainland Areas from 1964-99^a.

Year	Chignik Area		Cape Igvak		Southeastern District Mainland Area		Total
	Catch	Percent	Catch	Percent	Catch	Percent	
1964 ^b	556,890	90.6	14,980	2.4	43,021	7.0	614,891
1965	599,553	89.9	11,021	1.7	56,020	8.4	666,594
1966	219,794	88.0	18,003	7.2	12,011	4.8	249,808
1967	462,000	91.5	23,014	4.6	20,021	4.0	505,035
1968	977,382	82.5	135,951	11.5	70,959	6.0	1,184,292
1969	394,135	79.0	97,982	19.6	7,013	1.4	499,130
1970 ^c	1,325,734	72.5	434,394	23.8	68,181	3.7	1,828,309
1971	1,016,136	80.3	197,614	15.6	51,272	4.1	1,265,022
1972	378,218	88.0	33,865	7.9	17,752	4.1	429,835
Chignik harvests do not include test fish catches. 1964-72 catch and percentages are for the entire season. Catch and percentages after 1972 are only through July 25.							
1973 ^d	769,258	89.0	57,348	6.6	37,983	4.4	864,589
1974	530,278	73.6	122,071	16.9	68,029	9.4	720,378
1975	115,984	81.8	23,635	16.7	2,205	1.6	141,824
1976	792,024	83.0	117,926	12.4	44,730	4.7	954,680
1977	1,547,285	90.4	128,852	7.5	35,502	2.1	1,711,639
1978 ^{e,f}	1,454,389	85.4	227,014	13.3	22,064	1.3	1,703,467
1979 ^g	794,504	91.8	13,950	1.6	56,878	6.6	865,332
1980	670,001	91.3	32	0.0	63,724	8.7	733,757
1981	1,606,300	79.9	282,727	14.1	122,533	6.1	2,011,560
1982	1,250,768	84.5	167,401	11.3	62,767	4.2	1,480,936
1983	1,450,832	72.7	318,048	15.9	227,392	11.4	1,996,272
1984	2,474,405	73.9	449,372	13.4	423,068	12.6	3,346,845
1985 ^h	696,169	79.9	123,627	14.2	51,421	5.9	871,217
1986	1,456,729	82.6	188,017	10.7	118,006	6.7	1,762,752
1987	1,659,615	78.0	321,506	15.1	146,886	6.9	2,128,007
1988	675,487	95.7	11,218	1.6	19,320	2.7	706,025
1989	496,044	99.1	0	0.0	4,485	0.9	500,529
1990	1,205,575	83.6	107,706	7.5	128,599	8.9	1,441,880
1991 ⁱ	1,958,954	80.4	324,329	13.3	152,714	6.3	2,435,997
1992 ^j	1,054,309	81.1	152,358	11.7	93,845	7.2	1,300,512
1993	1,495,098	77.7	300,055	15.6	128,536	6.7	1,923,689
1994 ^k	1,632,435	80.6	250,230	12.4	142,350	7.0	2,025,015
1995	1,024,785	79.9	169,530	13.2	88,302	6.9	1,282,617
1996 ^l	1,710,249	79.7	308,327	14.4	127,201	5.9	2,145,777
1997	443,892	100.0	0	0.0	0	0.0	443,892
1998 ^m	786,466	91.2	8,813	1.0	66,893	7.8	862,172
1999	2,326,811	78.7	456,147	15.4	173,621	5.9	2,956,579

-Footnotes On Next Page-

- ^a The Cape Igvak and Southeastern District Mainland (SEDM) figures represent 80% of the total sockeye salmon catches for those areas based on the premise that 80% of the sockeye salmon caught in the Cape Igvak Section and the SEDM (excluding sockeye salmon caught in Northwest Stepovak Section from 1964-1991 and in Orzinski Bay since 1992) are bound for the Chignik Management Area (CMA).
- ^b The data from 1964-1972 are based on total yearly catches. Prior to 1973, Cape Igvak and Southeastern District Mainland fisheries were set by regulation to weekly fishing periods, usually 5 days per week. Time modifications were implemented when poor escapements occurred at Chignik.
- ^c Catches (1970-1992) were updated using historical electronic fish ticket databases.
- ^d During 1974-1977 all three fisheries were managed on a day by day basis.
- ^e From 1978-1991, the Cape Igvak Fishery management Plan allocated 15 percent of the total sockeye catch destined for Chignik.
- ^f During 1978, seining prior to July 11 was disallowed in the Southeastern District Mainland. The set gillnet fishery was allowed to fish 3 days per week through July 10 after which the fishery was managed on the basis of local stocks.
- ^g During 1979-1984 and prior to July 11, fishing was allowed 5 days per week in the Southeastern District Mainland Area with a maximum harvest of an estimated 60,000 sockeye destined for Chignik. If the Chignik Area sockeye catch was 1,000,000 or more before July 11, the 60,000 maximum harvest was to be dropped.
- ^h Beginning in 1985, Southeastern District Mainland Area (excluding the Northwest Stepovak Section from 1964-1991 and Orzinski Bay statistical area) was placed on an allocation of 6.2 percent of the total estimated Chignik sockeye catch through July 25. After July 25, the Southeastern District Mainland is managed on a local stock basis. The allocation changed to 6.0 percent beginning in 1988. Seining is still not allowed prior to July 11.
- ⁱ Includes overescapement of 278,305 sockeye counted past the weir during the Chignik Area seiners' boycott (Jun 23-Jul 4).

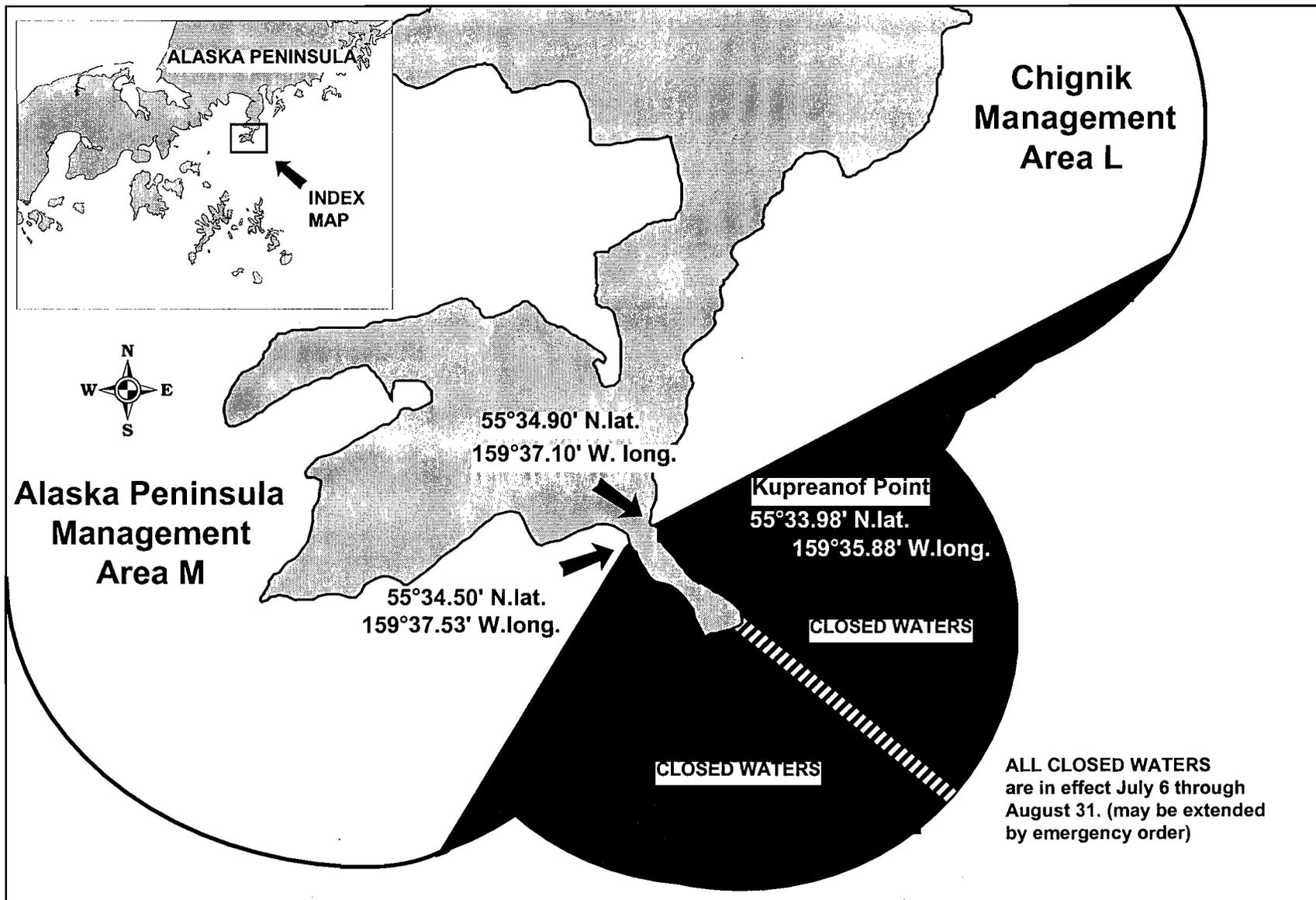
^j Review of Orzinski Lake historical and current escapement records led the BOF to redefine the Southeastern District Mainland Management Plan. Beginning in 1992, the SEDM fishery (excluding Orzinski Bay) was placed on an allocation of 7.0 percent of the total estimated Chignik sockeye catch through July 25.

^k Includes overescapement of 208,921 sockeye counted past the weir during the Chignik Area seiners' strike (June 22-June 25).

^l During the January 1996 BOF meeting, the area to be managed for local Orzinski Lake sockeye salmon was increased from only Orzinski Bay to the entire Northwest Stepovak Section. Prior to July 1, the entire Northwest Stepovak Section will be managed on an allocation based on the strength of the Chignik sockeye salmon runs. Beginning July 1, the Northwest Stepovak Section will be managed entirely on local stocks. The BOF also decreased the percentage of sockeye salmon allocated to the SEDM fishery from 7% to 6% to attempt to maintain traditional harvest levels of Chignik bound sockeye salmon in the SEDM fishery.

^m During the January 1998 BOF meeting, the area managed entirely for local Orzinski Lake sockeye salmon was reduced from the entire Northwest Stepovak Section to only Orzinski Bay. All sockeye salmon caught in the Northwest Stepovak Section beginning July 1 will still be considered 100% local fish and not counted toward the 6% allocation. Remainder of SEDM sockeye salmon harvest allocated as 80% Chignik bound fish. Assures minimum harvest of 600,000 sockeye salmon in Chignik through July 25.

ⁿ Includes 7,714 sockeye salmon caught by the Chignik Seinners Association (CSA), and an overescapement of 52,131 sockeye salmon counted past the weir during the CSA boycott (June 16-29).



Appendix C.7. Map of Kupreanof Point area with closed waters defined.

Appendix C.8. Southeastern District Mainland commercial fishing effort and assignment of sockeye salmon harvests June 1- July 25, 1985-99.

Year	Effort				Northwest Stepovak			SEDM minus Northwest Stepovak		SEDM		Total Catch
	Gillnet		Seine		Total	"Local"	on-local"	"Local"	on-local"	"Local"	on-local"	
	Permits	Landings	Permits	Landings								
1985 ^a	49	367	23	51	16,681	16,681	0	12,855	51,421	29,536	51,421	80,957
1986 ^a	42	616	18	29	59,025	59,025	0	29,501	118,006	88,526	118,006	206,532
1987 ^a	53	528	6	9	61,287	61,287	0	36,722	146,886	98,009	146,886	244,895
1988 ^a	41	300	16	45	57,010	57,010	0	4,830	19,320	61,840	19,320	81,160
1989 ^a	67	248	25	54	83,618	83,618	0	1,121	4,485	84,739	4,485	89,224
1990 ^a	46	277	69	131	3,279	3,279	0	32,609	128,599	35,888	128,599	164,487
1991 ^a	59	747	39	71	98,834	98,834	0	38,179	152,714	137,013	152,714	289,727
1992 ^b	59	650	6	14	113,428	101,198	12,232	20,403	81,613	121,599	93,845	215,444
1993 ^b	64	763	53	82	73,747	54,955	18,792	27,436	109,744	82,391	128,536	210,927
1994 ^b	56	678	0	0	89,522	52,880	36,642	26,427	105,708	79,307	142,350	221,657
1995 ^b	58	718	26	30	62,598	51,723	10,875	19,357	77,426	71,079	88,301	159,381
1996 ^c	64	1,164	25	46	137,925	127,645	10,280	29,230	116,921	156,875	127,201	284,076
1997 ^c	57	1,173	12	23	304,865	304,865	0	0	0	304,865	0	304,865
1998 ^c	45	340	18	23	33,515	33,515	0	16,723	66,893	50,238	66,893	117,131
1999 ^c	63	649	27	30	15,258	3,052	12,206	40,354	161,414	43,405	173,621	217,026
Average:												
1985-91	51	440	28	56	54,248	54,248	0	22,260	88,776	76,507	88,776	165,283
1992-95	59	702	21	32	84,824	65,189	19,635	23,406	93,623	88,594	113,258	201,852
1996-97	61	1,169	19	35	221,395	216,255	5,140	14,615	58,461	230,870	63,601	294,471

^a From 1970 through 1991, the Chignik contribution is 80% of the sockeye salmon harvested in the Beaver Bay, Balboa Bay, Southwest Stepovak, Stepovak Flats, and East Stepovak Sections.

^b From 1992 through 1995, the Chignik contribution is 80% of the sockeye salmon harvested in the Southeastern District Mainland (SEDM) fishery, except Orzinski Bay where 100% of the sockeye salmon are considered local production.

^c From 1996 through 1999, the Chignik contribution is 80% of the sockeye salmon harvested in the SEDM fishery, except beginning July 1, in the Northwest Stepovak Section where 100% of the sockeye salmon are considered local production.

Appendix C.9. Northwest Stepovak Section commercial salmon harvest, all gear combined, by species and day, 1999.

Date	Permits	Landings	Number of Salmon					Total
			Chinook	Sockeye	Coho	Pink	Chum	
15-Jun	a	a	a	a	a	a	a	a
16-Jun	9	17	5	3,801	0	0	28	3,834
17-Jun	8	15	2	3,565	0	1	24	3,592
18-Jun	5	9	0	2,266	0	0	53	2,319
19-Jun	7	12	1	2,945	0	0	74	3,020
24-Jun	8	14	1	3,112	0	2	78	3,193
25-Jun	9	21	1	6,630	0	2	152	6,785
26-Jun	9	12	0	2,050	0	2	35	2,087
27-Jul	7	13	0	1,635	8	1,539	501	3,683
28-Jul	a	a	a	a	a	a	a	a
30-Jul	a	a	a	a	a	a	a	a
31-Jul	a	a	a	a	a	a	a	a
2-Aug	a	a	a	a	a	a	a	a
3-Aug	3	3	0	295	0	269	263	827
4-Aug	a	a	a	a	a	a	a	a
6-Aug	a	a	a	a	a	a	a	a
7-Aug	4	6	0	441	1	55,447	280	56,169
9-Aug	3	3	0	382	7	17,996	349	18,734
10-Aug	3	4	0	233	21	19,091	254	19,599
1-Sep	3	3	0	604	49	95	19	767
2-Sep	3	3	0	832	93	416	38	1,379
3-Sep	3	4	0	540	60	268	37	905
6-Sep	3	4	0	474	79	10	9	572
7-Sep	a	a	a	a	a	a	a	a
8-Sep	a	a	a	a	a	a	a	a
13-Sep	3	3	0	382	40	1	3	426
14-Sep	a	a	a	a	a	a	a	a
15-Sep	a	a	a	a	a	a	a	a
Total	21	176	11	34,562	451	100,256	3,394	138,674
Total July 1-25	0	0	0	0	0	0	0	0

^a Confidentiality requirements prohibit releasing this information.

Appendix C.10. Southeastern District Mainland commercial salmon harvest, all gear combined, by species and day, 1999.

Date	Permits	Landings	Number of Salmon					Total
			Chinook	Sockeye	Coho	Pink	Chum	
15-Jun	5	5	4	1,792	0	0	47	1,843
16-Jun	36	65	29	18,538	0	1	195	18,763
17-Jun	34	73	24	22,065	0	2	327	22,418
18-Jun	36	63	14	16,248	0	1	240	16,503
19-Jun	45	80	16	20,715	0	0	507	21,238
24-Jun	46	53	10	18,941	0	29	475	19,455
25-Jun	54	113	35	46,120	2	17	1,333	47,507
26-Jun	55	81	13	25,413	1	3	607	26,037
23-Jul	29	42	6	16,395	229	5,445	911	22,986
24-Jul	a	a	a	a	a	a	a	a
25-Jul	72	102	33	29,315	628	37,132	3,672	70,780
27-Jul	39	68	9	13,672	1,248	11,468	2,539	28,936
28-Jul	35	38	8	7,758	851	9,983	1,191	19,791
30-Jul	31	43	6	9,821	484	28,418	2,534	41,263
31-Jul	33	61	6	16,685	1,547	40,246	5,779	64,263
2-Aug	18	21	0	2,235	82	7,843	4,852	15,012
3-Aug	26	36	8	12,655	540	67,836	3,917	84,956
4-Aug	21	28	4	8,653	354	35,433	2,757	47,201
6-Aug	32	50	9	16,993	516	123,677	4,824	146,019
7-Aug	29	44	17	10,331	341	88,909	3,507	103,105
9-Aug	26	28	2	3,300	428	84,413	5,441	93,584
10-Aug	27	37	5	3,899	1,285	109,334	4,599	119,122
15-Aug	11	16	1	3,124	416	81,307	423	85,271
16-Aug	10	18	0	3,750	534	65,091	688	70,063
17-Aug	8	18	0	5,747	169	21,650	1,028	28,594
18-Aug	5	13	0	2,505	97	2,954	349	5,905
19-Aug	8	15	1	8,784	164	20,920	1,036	30,905
20-Aug	6	13	0	4,682	125	3,758	633	9,198
21-Aug	9	14	0	4,019	256	3,222	337	7,834
22-Aug	a	a	a	a	a	a	a	a
1-Sep	20	20	0	5,351	558	1,545	363	7,817
2-Sep	25	35	1	11,717	1,386	3,129	545	16,778
3-Sep	28	41	0	14,540	1,437	1,758	372	18,107
6-Sep	27	30	2	4,527	658	66	69	5,322
7-Sep	32	40	2	10,766	1,335	202	134	12,439
8-Sep	33	42	0	8,514	793	168	81	9,556
13-Sep	20	26	0	7,419	477	33	118	8,047
14-Sep	22	30	0	9,489	520	1	65	10,075
15-Sep	21	30	0	9,253	760	2	86	10,101

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Appendix C.10. (page 2 of 2)

Date	Permits	Landings	Number of Salmon					Total
			Chinook	Sockeye	Coho	Pink	Chum	
20-Sep	11	17	0	2,221	263	0	23	2,507
21-Sep	14	14	2	4,116	463	0	37	4,618
22-Sep	15	18	0	4,782	592	0	28	5,402
27-Sep	8	11	0	1,785	130	0	6	1,921
28-Sep	11	11	0	3,128	197	0	7	3,332
29-Sep	10	12	0	3,454	291	0	24	3,769
Total	107	1,619	267	457,565	20,270	857,589	56,938	1,392,629
Totals through July 25								
	90	679	184	217,026	898	42,905	8,390	269,403
Totals from September 1 - 29								
	46	377	7	101,062	9,860	6,904	1,958	119,791

^a Confidentiality requirements prohibit reporting harvest by day.

Appendix C.11. Southeastern District Mainland commercial purse seine salmon harvest by species and day, 1999.

Date	Permits	Landings	Number of Salmon					Total
			Chinook	Sockeye	Coho	Pink	Chum	
23-Jul	a	a	a	a	a	a	a	a
25-Jul	27	28	20	10,661	510	31,374	1,523	44,088
27-Jul	*	*	*	*	*	*	*	*
28-Jul	3	3	1	1,089	571	5,318	211	7,190
3-Aug	5	5	5	7,255	311	59,809	1,823	69,203
4-Aug	3	3	0	3,005	252	27,967	698	31,922
6-Aug	8	8	9	11,277	393	113,247	2,182	127,108
10-Aug	10	10	5	1,840	1,145	99,028	2,886	104,904
15-Aug	6	6	0	312	212	76,655	102	77,281
16-Aug	4	4	0	127	132	58,596	162	59,017
17-Aug	a	a	a	a	a	a	a	a
19-Aug	a	a	a	a	a	a	a	a
3-Sep	a	a	a	a	a	a	a	a
6-Sep	a	a	a	a	a	a	a	a
Total	37	96	57	47,929	5,415	716,294	21,209	790,904
Through July 25	27	a	a	a	a	a	a	a

^a Confidentiality requirements prohibit reporting harvest by day.

Appendix C.12 Southeastern District Mainland commercial set gillnet salmon harvest
by species and day, 1999.

Date	Permits	Landings	Number of Salmon					Total
			Chinook	Sockeye	Coho	Pink	Chum	
15-Jun	5	5	4	1,792	0	0	47	1,843
16-Jun	36	65	29	18,538	0	1	195	18,763
17-Jun	34	73	24	22,065	0	2	327	22,418
18-Jun	36	63	14	16,248	0	1	240	16,503
19-Jun	45	80	16	20,715	0	0	507	21,238
24-Jun	46	53	10	18,941	0	29	475	19,455
25-Jun	54	113	35	46,120	2	17	1,333	47,507
26-Jun	55	81	13	25,413	1	3	607	26,037
23-Jul	27	40	6	15,736	192	2,409	816	19,159
24-Jul	a	a	a	a	a	a	a	a
25-Jul	45	74	13	18,654	118	5,758	2,149	26,692
27-Jul	38	67	9	13,202	793	8,095	2,381	24,480
28-Jul	32	35	7	6,669	280	4,665	980	12,601
30-Jul	28	40	5	9,471	424	7,644	2,444	19,988
31-Jul	29	57	6	15,861	889	13,958	3,435	34,149
2-Aug	17	20	0	2,235	82	4,044	999	7,360
3-Aug	21	31	3	5,400	229	8,027	2,094	15,753
4-Aug	18	25	4	5,648	102	7,466	2,059	15,279
6-Aug	24	42	0	5,716	123	10,430	2,642	18,911
7-Aug	25	40	2	6,327	173	13,092	2,680	22,274
9-Aug	17	19	1	1,955	133	5,925	1,570	9,584
10-Aug	17	27	0	2,059	140	10,306	1,713	14,218
15-Aug	5	10	1	2,812	204	4,652	321	7,990
16-Aug	6	14	0	3,623	402	6,495	526	11,046
17-Aug	7	17	0	5,747	169	6,680	1,028	13,624
18-Aug	5	13	0	2,505	97	2,954	349	5,905
19-Aug	6	13	1	5,181	83	3,620	686	9,571
20-Aug	6	13	0	4,682	125	3,758	633	9,198
21-Aug	a	a	a	a	a	a	a	a
22-Aug	a	a	a	a	a	a	a	a
1-Sep	20	20	0	5,351	558	1,545	363	7,817
2-Sep	25	35	1	11,717	1,386	3,129	545	16,778
3-Sep	27	40	0	13,919	1,326	1,303	345	16,893
6-Sep	26	29	2	4,040	634	66	62	4,804
7-Sep	32	40	2	10,766	1,335	202	134	12,439
8-Sep	33	42	0	8,514	793	168	81	9,556
13-Sep	20	26	0	7,419	477	33	118	8,047
14-Sep	22	30	0	9,489	520	1	65	10,075
15-Sep	21	30	0	9,253	760	2	86	10,101
20-Sep	11	17	0	2,221	263	0	23	2,507

-Continued-

Appendix C.12. (page 2 of 2)

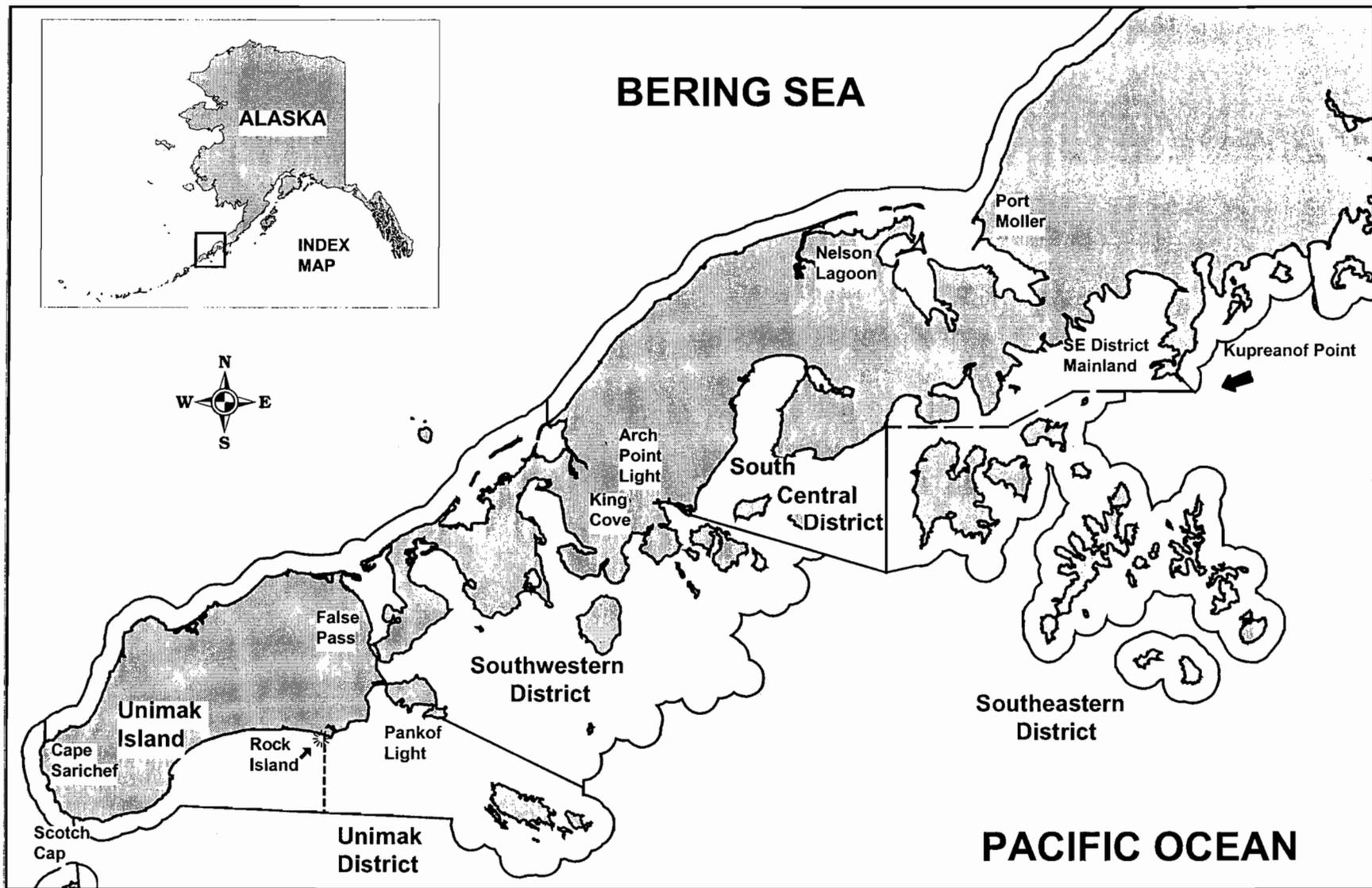
Date	Permits	Landings	Number of Salmon					Total
			Chinook	Sockeye	Coho	Pink	Chum	
21-Sep	14	14	2	4,116	463	0	37	4,618
22-Sep	15	18	0	4,782	592	0	28	5,402
27-Sep	8	11	0	1,785	130	0	6	1,921
28-Sep	11	11	0	3,128	197	0	7	3,332
29-Sep	10	12	0	3,454	291	0	24	3,769
Total	70	1,523	210	409,636	14,855	141,295	35,729	601,725
Total through July 25	63	649	164	205,706	351	8,495	6,772	221,488

^a Confidentiality requirements prohibit reporting harvest by day.

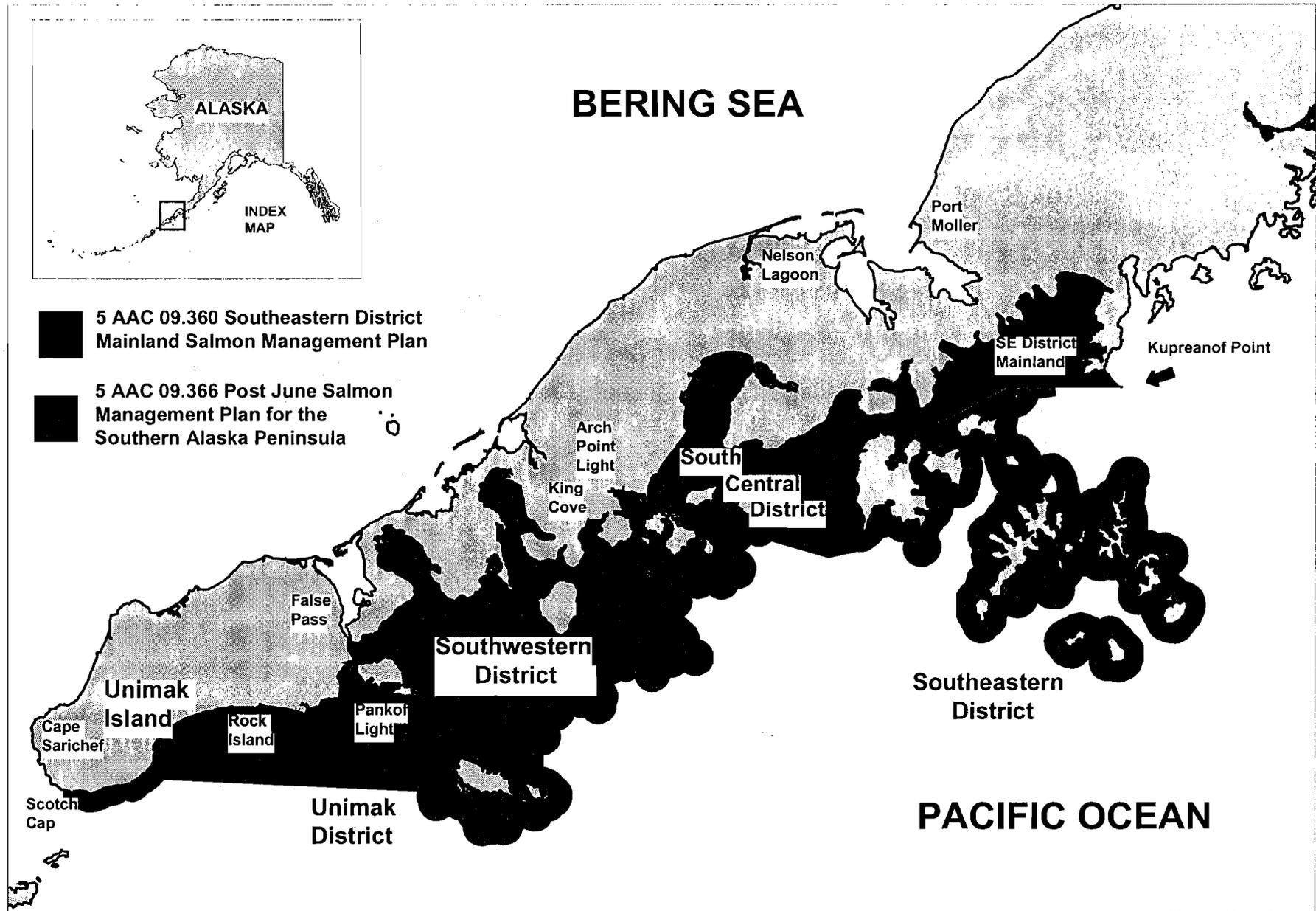
Appendix C.13. Southeastern District Mainland commercial sockeye
salmon harvest, by gear, for the entire season, 1970-99^a.

Year	Catch by Gear				Total Catch
	Set Net		Purse Seine		
	Number	Percent	Number	Percent	
1970	81,259	95.1	4,158	4.9	85,417
1971	61,037	95.1	3,141	4.9	64,178
1972	19,957	89.9	2,233	10.1	22,190
1973	46,586	97.2	1,346	2.8	47,932
1974	66,200	74.0	23,219	26.0	89,419
1975	1,807	57.3	1,349	42.7	3,156
1976	54,190	90.4	5,725	9.6	59,915
1977	35,410	73.1	13,053	26.9	48,463
1978	30,229	87.1	4,462	12.9	34,691
1979	89,863	71.2	36,270	28.8	126,133
1980	115,978	89.0	14,344	11.0	130,322
1981	226,820	87.4	32,719	12.6	259,539
1982	109,867	93.1	8,165	6.9	118,032
1983	284,735	72.2	109,489	27.8	394,224
1984	617,011	90.7	63,634	9.3	680,645
1985	119,672	86.8	18,219	13.2	137,891
1986	224,333	91.4	21,178	8.6	245,511
1987	290,042	96.9	9,421	3.1	299,463
1988	125,509	79.2	32,865	20.8	158,374
1989	151,745	53.8	130,549	46.2	282,294
1990	158,065	57.0	119,395	43.0	277,460
1991	336,238	84.8	60,417	15.2	396,655
1992	283,927	86.8	43,267	13.2	327,194
1993	271,750	82.1	59,265	17.9	331,015
1994	305,447	92.5	24,832	7.5	330,279
1995	315,754	79.0	83,721	21.0	399,475
1996	337,310	93.4	23,873	6.6	361,183
1997	379,619	93.1	27,928	6.9	407,547
1998	204,626	73.4	74,164	26.6	278,790
1999	409,636	89.5	47,929	10.5	457,565
Average 1979-98					
	247,416	83.3	49,686	16.7	297,101
Average 1989-98					
	274,448	80.9	64,741	19.1	339,189

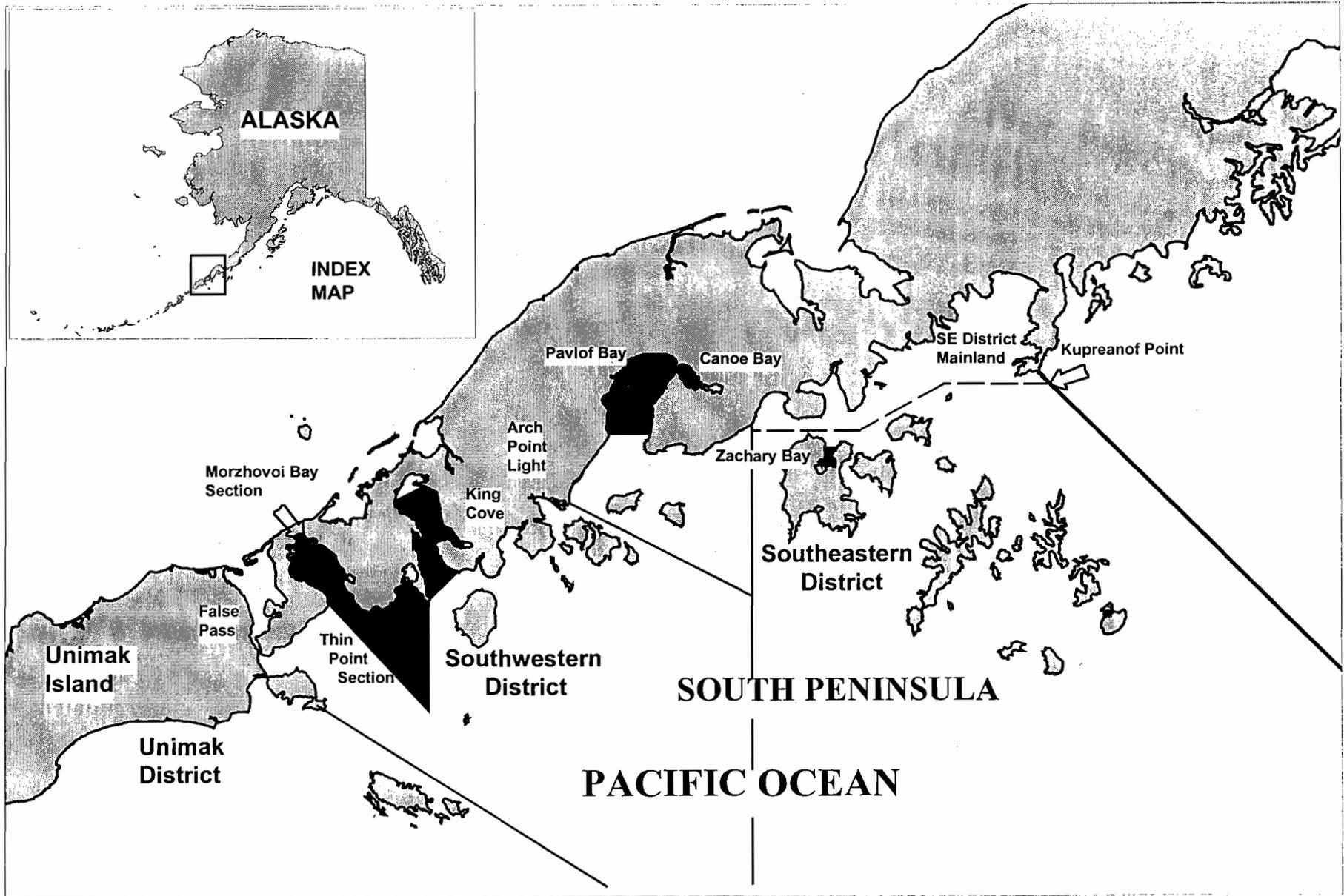
^a Set gillnet gear only prior to July 11 since 1978 season.



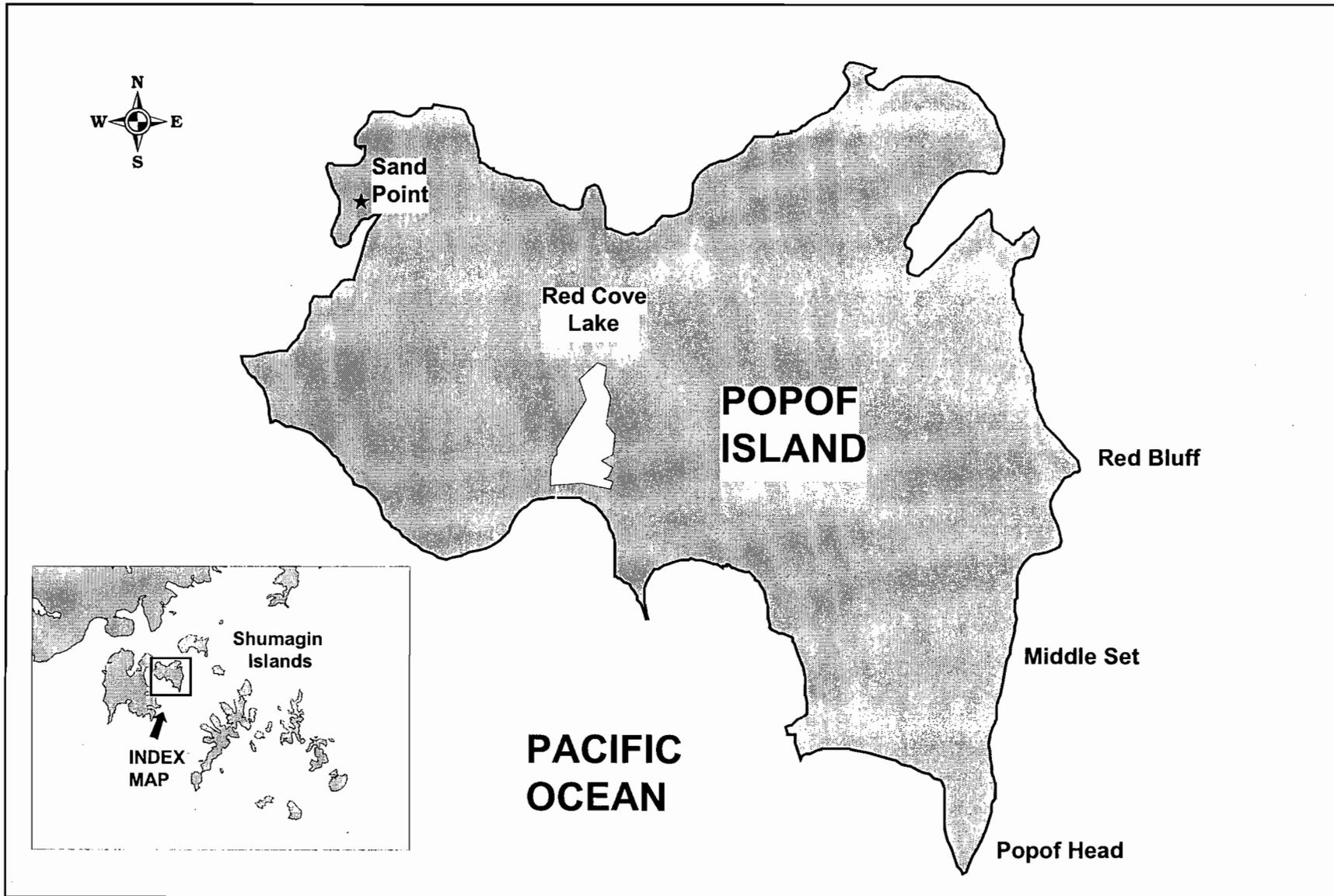
Appendix D.1. Map of the South Peninsula from Kupreanof Point to Scotch Cap with the general post June fishing area (Rock Island-Kupreanof Point) and the Southeastern District Mainland area shown.



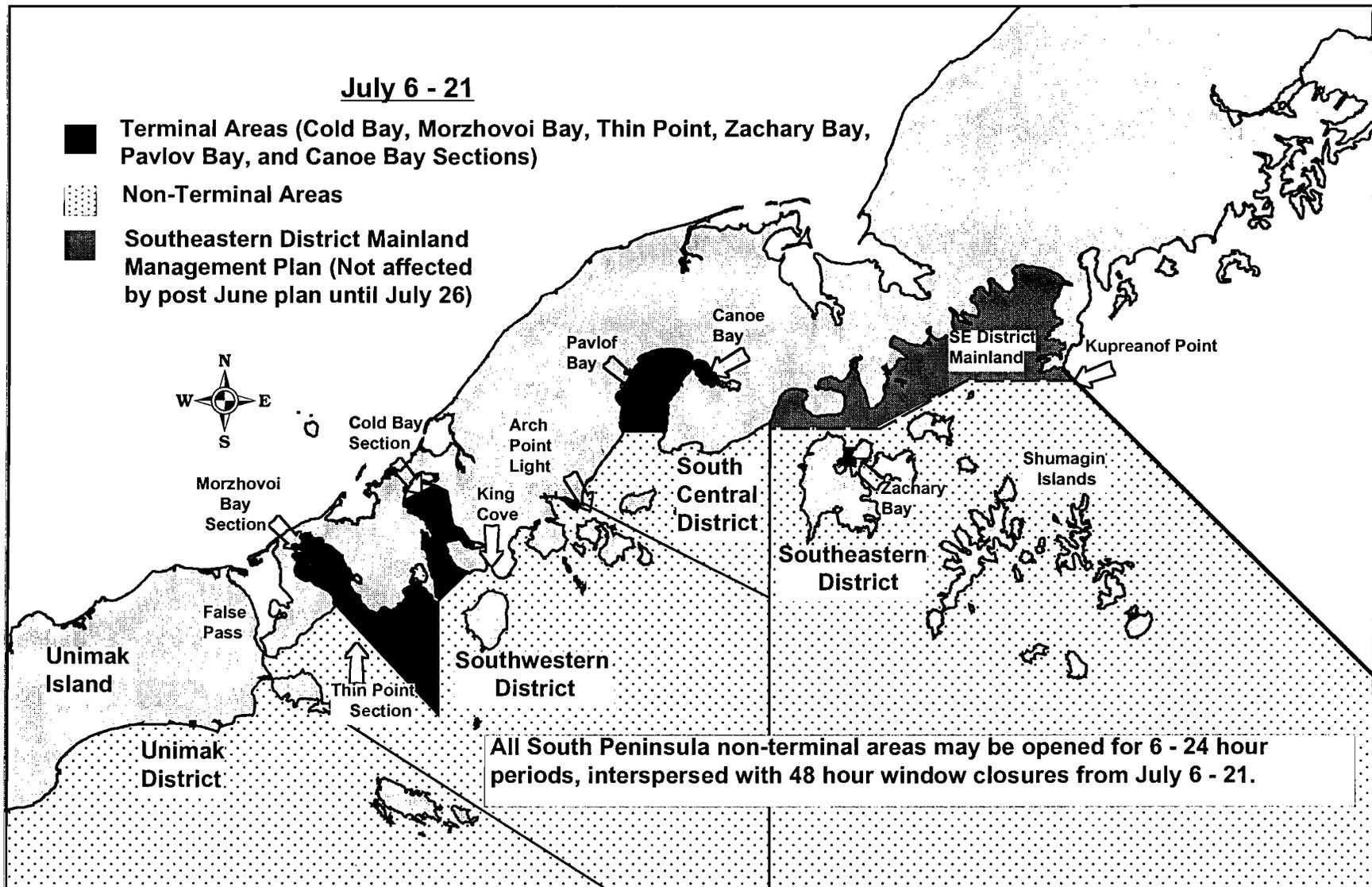
Appendix D.2. Map of the South Peninsula with the areas effected by the Southeastern District Mainland and the post June Salmon Management Plans during 1993-97 defined.



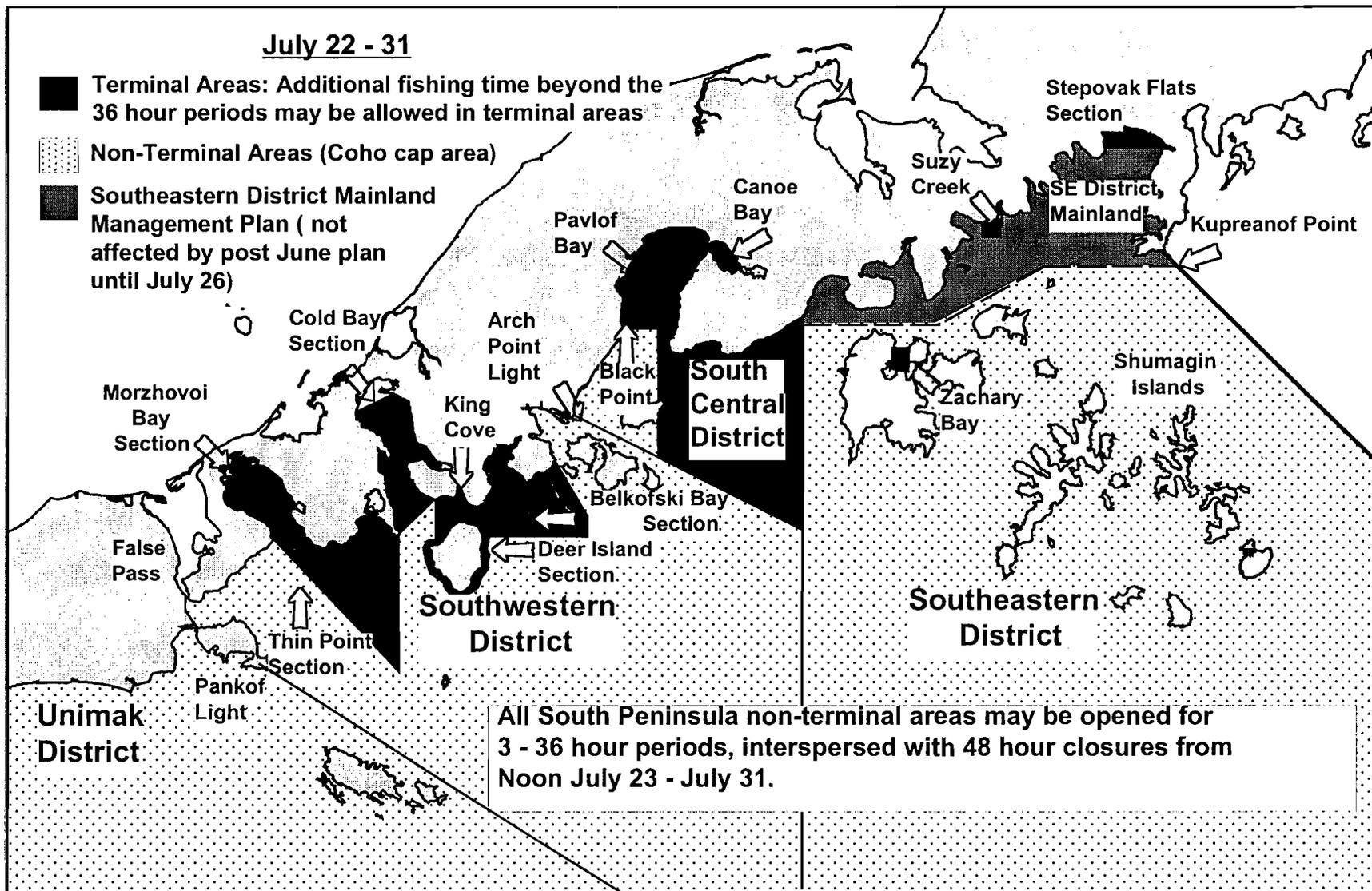
Appendix D.3. Map of the South Peninsula with those areas where fishing time could be allowed during July 6-19, 1993-97 defined.



Appendix D.4. Map of Popof Island with the test fishing sites at Popof Head, Middle Set, and Red Bluff defined.



Appendix D.5. Map of the South Peninsula post June fishery schedule during July 6-21 defined. Fishing may only be permitted in State waters (within three miles of shore).



Appendix D.6. Map of the South Peninsula with those areas where additional fishing time may be allowed during July 22-31 defined. Fishing may only be permitted in State waters (within three miles of shore).

Appendix D.7. Summary of the Shumagin Islands Section July salmon test fishery results, 1999^a.

Date	Number of Sets	Number of Adult Salmon						Immature Salmon							
		Chinook	Sockeye	Coho	Pink	Chum	Total	Number					Percent		
								Chinook	Sockeye	Coho	Chum	Total	Sockeye	Chum	
1-Jul	5	0	2,722	1	2,218	1,414	6,355	1	132	0	0	133	99.2	0.0	
	Avg/Set	0	544.4	0.2	443.6	282.8	1,271.0	0.2	26.4	0	0	26.6			
2-Jul	5	5	3,197	0	2,900	629	6,731	1	255	0	1	257	99.2	0.4	
	Avg/Set	1.0	639.4	0.0	580.0	125.8	1,346.2	0.2	51	0	0.2	51.4			
3-Jul	5	6	2,043	2	1,916	353	4,320	1	255	0	1	257	99.2	0.4	
	Avg/Set	1.2	408.6	0.4	383.2	70.6	864.0	0.2	51	0	0.2	51.4			
4-Jul	5	10	2,393	8	2,860	1,356	6,627	4	815	0	19	838	97.3	2.3	
	Avg/Set	2.0	478.6	1.6	572.0	271.2	1,325.4	0.8	163	0	3.8	167.6			
5-Jul	3	4	1,647	5	1,298	724	3,678	5	506	0	17	528	95.8	3.2	
	Avg/Set	1.3	549.0	1.7	432.7	241.3	1,226.0	1.7	169	0.0	5.7	176.0			
7-Jul	3	1	282	2	1,148	204	1,637	1	169	0	4	174	97.1	2.3	
	Avg/Set	0.3	94.0	0.7	382.7	68.0	545.7	0.3	56.3	0.0	1.3	58.0			
		Number of Adult Salmon						Number of Immature Salmon							
Total	Number of Sets	Chinook	Sockeye	Coho	Pink	Chum	Total	Chinook	Sockeye	Coho	Pink	Chum	Total		
	26	26	12,284	18	12,340	4,680	29,348	13	2,132	0	0	42	2,187		

^aTest fishing is standardized to purse seine gear, conducting 20 minute sets at Popof Head, Middle Set, and Red Bluff located on Popof Island, additional sets are made if time allows.

Appendix D.8. South Peninsula post June commercial salmon harvest, all gear combined, by species July 6-21, 1999.

Catch Date	Number of Salmon					Total
	Chinook	Sockeye	Coho	Pink	Chum	
Non terminal areas, all gear combined, by day						
6-Jul	219	88,617	692	54,674	21,723	165,925
8-Jul	0	257	2	6	6	271
9-Jul	103	125,769	2,579	84,885	18,218	231,554
11-Jul	0	575	1	9	2	587
12-Jul	140	120,732	4,287	86,926	16,345	228,430
13-Jul	1	506	3	321	57	888
15-Jul	91	62,781	4,788	54,356	20,401	142,417
18-Jul	101	89,187	5,333	83,040	17,351	195,012
20-Jul	0	1,125	16	88	36	1,265
21-Jul	100	77,829	7,751	82,088	18,909	186,677
Total	755	567,378	25,452	446,393	113,048	1,153,026

Non terminal areas, all gear combined, by location						
Shumagin Islands	701	366,190	17,171	306,988	88,050	779,100
South Unimak	9	6,324	328	26,137	4,601	37,399
Balance of South Peninsula	45	194,864	7,953	113,268	20,397	336,527
Total	755	567,378	25,452	446,393	113,048	1,153,026

Terminal areas, all gear combined, by day						
6-Jul	5	1,255	3	17	118	1,398
9-Jul	1	7,533	22	84	352	7,992
12-Jul	2	3,991	106	85	324	4,508
15-Jul	0	3,533	102	148	325	4,108
18-Jul	1	2,485	66	400	252	3,204
21-Jul	1	1,979	168	2,149	361	4,658
Total	10	20,776	467	2,883	1,732	25,868

Appendix D.9. South Peninsula post June commercial salmon harvest, all gear combined, by species July 22-31, 1999.

Catch Date	Number of Salmon					Total
	Chinook	Sockeye	Coho	Pink	Chum	
Non terminal areas (including SEDM after July 25), all gear combined, by day						
23-Jul	23	19,474	2,910	31,679	5,403	59,489
24-Jul	104	58,187	9,510	101,719	18,304	187,824
25-Jul	0	758	6	2,199	233	3,196
27-Jul	44	43,720	6,721	78,461	12,920	141,866
28-Jul	90	40,567	13,396	145,981	16,998	217,032
30-Jul	54	23,924	7,159	95,782	10,688	137,607
31-Jul	129	72,082	18,216	306,952	33,306	430,685
Total	444	258,712	57,918	762,773	97,852	1,177,699
Non terminal areas, all gear combined, by location						
Shumagin Islands	401	123,621	42,759	519,365	56,052	742,198
South Unimak	0	827	251	6,760	536	8,374
SEDM July 26-31	29	47,706	4,130	89,478	11,975	153,318
Balance of South Peninsula	14	86,558	10,778	147,170	29,289	273,809
Total	444	258,712	57,918	762,773	97,852	1,177,699
Terminal areas (including SEDM terminal areas after July 25), all gear combined, by day						
23-Jul	0	1,138	32	7,164	3,525	11,859
24-Jul	0	7,540	45	29,915	2,231	39,731
25-Jul	0	0	0	2,973	803	3,776
26-Jul	0	11	0	3,574	751	4,336
27-Jul	0	1,410	165	55,573	3,265	60,413
28-Jul	0	939	74	39,096	582	40,691
30-Jul	0	762	0	41,027	568	42,357
31-Jul	0	3,807	32	116,991	1,831	122,661
Total	0	15,607	348	296,313	13,556	325,824

Appendix D.10. South Peninsula fall fishery (Sep. 1-Oct. 31) commercial salmon harvest, all gear combined, by species and year, 1970-99.^a

Year	Permits	Landings	Number Of Salmon					Total
			Chinook	Sockeye	Coho	Pink	Chum	
1970	b	b	b	b	b	b	b	b
1971	b	b	b	b	b	b	b	b
1972	b	b	b	b	b	b	b	b
1973	0	0	0	0	0	0	0	0
1974	0	0	0	0	0	0	0	0
1975	0	0	0	0	0	0	0	0
1976	4	15	0	1,776	160	85	0	2,021
1977	9	23	0	2,465	635	0	528	3,628
1978	21	51	0	808	4,651	0	5,726	11,185
1979	25	60	0	2,375	17,468	54	5,307	25,204
1980	29	139	0	6,513	30,390	154	4,166	41,223
1981	31	115	0	10,004	21,016	0	220	31,240
1982	29	213	2	24,471	10,742	0	3,407	38,622
1983	48	334	35	25,493	14,945	1,254	2,958	44,685
1984	52	269	10	13,351	10,526	458	1,789	26,134
1985	55	182	5	4,002	14,725	290	6,960	25,982
1986	46	146	2	3,459	6,318	518	2,519	12,816
1987	65	323	12	23,332	22,040	1,499	52,079	98,962
1988	68	328	4	24,635	26,497	62,290	19,345	132,771
1989	60	363	12	34,932	15,724	281	10,058	61,007
1990	66	426	7	67,142	23,318	584	73,195	164,246
1991	52	273	2	20,056	20,337	0	16,183	56,578
1992	53	333	58	13,115	35,323	1,525	3,486	53,507
1993	50	248	31	16,386	16,965	515	2,918	36,815
1994	75	373	18	25,481	36,563	294	214,174	276,530
1995	55	473	3	110,657	26,083	1,710	9,860	148,313
1996	57	364	5	26,301	26,525	136	2,910	55,877
1997	51	513	30	76,965	36,447	3,568	6,199	123,209
1998	67	430	25	44,775	20,838	1,818	10,382	77,838
1999	58	503	12	118,064	17,622	12,353	3,668	151,719
<hr/>								
Average 1989 - 1998								
	59	380	19	43,581	25,812	1,043	34,937	105,392
Average 1979 - 1998								
	52	295	13	28,672	21,640	3,847	22,406	76,578

^a Test fish harvests are not included

^b Confidentiality requirements prohibit reporting harvest.

Appendix D.11. South Peninsula (minus the Southeastern District Mainland fishery July 1-25 salmon harvest) post June (July 1-Oct 31) commercial salmon harvest, all gear combined, by species and year, 1970-99.^a

Year	Permits ^b	Landings	Number Of Salmon					Total
			Chinook	Sockeye	Coho	Pink	Chum	
1970	127	1,467	758	44,795	32,340	1,610,724	535,625	2,224,242
1971	175	2,166	1,252	190,632	16,814	1,411,230	838,978	2,458,906
1972	140	848	656	35,120	7,916	55,802	204,113	303,607
1973	115	582	151	37,424	6,340	34,118	87,077	165,110
1974	95	509	532	108,923	9,152	71,459	64,455	254,521
1975	46	65	0	293	3	52,375	29,158	81,829
1976	125	1,102	6	11,674	176	2,324,547	116,355	2,452,758
1977	103	1,131	7	26,545	1,168	1,425,107	119,646	1,572,473
1978	123	2,081	203	61,379	60,417	5,467,134	408,544	5,997,677
1979	165	2,446	972	209,755	350,770	6,365,911	371,358	7,298,766
1980	152	2,646	1,522	310,278	271,738	6,295,345	785,026	7,663,909
1981	168	2,502	4,190	218,667	158,846	4,564,926	1,033,055	5,979,684
1982	183	2,781	2,313	140,487	252,885	4,806,182	1,042,978	6,244,845
1983	201	2,667	11,726	292,536	124,431	2,760,452	816,567	4,005,712
1984	217	3,525	4,290	334,781	306,522	10,469,392	1,176,050	12,291,035
1985	213	2,787	688	272,059	169,137	4,249,809	827,781	5,519,474
1986	202	3,001	3,475	545,160	235,082	3,698,727	1,346,879	5,829,323
1987	233	2,692	3,881	410,755	224,543	1,189,211	911,414	2,739,804
1988	243	4,356	6,797	635,804	502,960	6,767,066	1,307,053	9,219,680
1989	274	3,993	4,106	825,372	440,171	6,879,878	531,759	8,681,286
1990	261	3,257	5,480	875,237	288,728	2,299,161	672,937	4,141,543
1991	234	3,573	2,423	465,874	311,825	9,952,671	788,955	11,521,748
1992	233	3,907	4,003	765,575	414,809	9,101,628	863,505	11,149,520
1993	221	3,086	3,524	497,933	209,816	9,765,709	504,894	10,981,876
1994	213	3,302	1,642	408,089	249,066	6,640,031	1,591,094	8,889,922
1995	207	3,824	2,010	731,651	252,358	16,071,184	1,155,825	18,213,028
1996	180	1,966	1,914	215,721	263,654	1,738,973	379,578	2,599,840
1997	168	1,399	1,206	325,261	110,488	1,681,374	277,559	2,395,888
1998	209	3,975	1,793	764,947	150,735	7,441,311	455,978	8,814,764
1999	185	4,205	1,580	1,355,842	191,585	8,369,899	563,270	10,482,176
1979-93	Average							
	213	3,148	3,959	453,352	284,151	5,944,405	865,347	7,551,214
1994-98	Average							
	195	2,893	1,713	489,134	205,260	6,714,575	772,007	8,182,688

^a Test fish harvests are not included.

^b Permits used equals total South Peninsula post June permits.

Appendix D.12. South Peninsula post June commercial salmon harvest, all gear combined,
by species and year, July 1-October 31, 1970-99.

Year	Permits	Landings	Number of Salmon					Total
			Chinook	Sockeye	Coho	Pink	Chum	
1970	127	1,612	777	63,569	32,519	1,630,404	550,698	2,277,967
1971	175	2,325	1,305	225,162	16,906	1,423,528	855,916	2,522,817
1972	140	940	673	45,174	7,999	60,270	212,505	326,621
1973	115	710	159	58,207	6,571	38,500	91,810	195,247
1974	95	744	557	171,700	9,362	100,179	71,430	353,228
1975	46	90	0	3,449	66	55,395	29,928	88,838
1976	125	1,181	14	20,707	213	2,342,600	121,282	2,484,816
1977	103	1,315	35	60,669	2,108	1,443,245	126,762	1,632,819
1978	123	2,187	222	74,839	60,771	5,500,177	423,532	6,059,541
1979	165	2,699	1,049	283,352	356,562	6,409,584	378,712	7,429,259
1980	152	2,948	1,569	371,638	273,328	6,335,159	843,988	7,825,682
1981	168	2,940	4,415	316,945	161,899	4,581,643	1,201,454	6,266,356
1982	183	3,361	2,566	177,160	254,798	5,016,065	1,171,508	6,622,097
1983	210	3,210	12,833	522,913	127,157	2,771,744	917,198	4,351,845
1984	217	4,251	4,913	525,275	310,910	10,668,889	1,312,347	12,822,334
1985	213	2,970	724	294,782	170,046	4,323,885	912,580	5,702,017
1986	202	3,444	3,586	687,525	235,852	3,739,423	1,394,332	6,060,718
1987	233	2,926	3,935	463,090	224,740	1,191,512	929,782	2,813,059
1988	243	4,701	7,011	716,964	505,278	6,864,600	1,381,796	9,475,649
1989	274	4,185	4,225	909,393	441,397	7,089,895	538,177	8,983,087
1990	261	3,663	6,164	1,039,265	305,509	2,346,043	715,940	4,412,921
1991	234	3,889	2,807	570,688	313,210	9,977,423	797,890	11,662,018
1992	233	4,317	4,040	870,687	414,933	9,117,479	880,066	11,287,205
1993	221	3,683	4,301	639,412	214,020	9,843,962	513,579	11,215,274
1994	213	3,738	1,726	541,108	250,079	6,648,470	1,593,590	9,034,973
1995	207	4,228	2,079	824,679	254,581	16,123,733	1,172,964	18,378,036
1996	180	2,825	2,124	392,038	267,494	1,810,624	411,581	2,883,861
1997	168	2,594	1,352	630,008	111,872	1,697,989	283,929	2,725,150
1998	209	4,340	2,100	882,078	153,694	7,566,341	465,907	9,070,120
1999	185	4,351	1,619	1,403,036	192,480	8,412,751	567,929	10,577,815
Average 1979-98								
	209	3,546	3,676	582,950	267,368	6,206,223	890,866	7,951,083
Average 1989-98								
	220	3,746	3,092	729,936	272,679	7,222,196	737,362	8,965,265
Average 1978-92								
	207	3,446	4,004	521,634	277,093	5,728,901	919,953	7,451,586
Average 1993-97								
	198	3,414	2,316	605,449	219,609	7,224,956	795,129	8,847,459

Appendix D.13. South Peninsula post June commercial salmon harvest, all gear combined, by species and year, July 1 - October 31, 1909-99.

Year	Number of Salmon					Total
	Chinook	Sockeye	Coho ^a	Pink	Chum	
1909			7,200			
1910			5,500			
1911			12,400			
1912			27,000			
1913			0			
1914			0			
1915			16,200			
1916			34,100			
1917			4,600			
1918			16,300			
1919			56,100			
1920			47,700			
1921			1,500			
1922			2,200			
1923			75,300			
1924			127,300			
1925			127,100			
1926			193,800			
1927			125,300			
1928			96,600			
1929			84,500			
1930			161,100			
1931			128,700			
1932			112,300			
1933			190,000			
1934			247,100			
1935			117,200			
1936			284,600			
1937			73,900			
1938			220,700			
1939			98,900			
1940			184,200			
1941			183,000			
1942			123,000			
1943			90,600			
1944			238,700			
1945			116,100			
1946			151,400			
1947			55,800			
1948			39,200			
1949			19,500			
1950			70,700			

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Appendix D.13. (page 2 of 3)

Year	Number of Salmon					Total
	Chinook	Sockeye	Coho ^a	Pink	Chum	
1951			55,700			
1952			39,200			
1953			47,900			
1954			49,400			
1955			44,800			
1956			61,900			
1957			49,900			
1958			70,600			
1959			8,500			
1960			1,800			
1961			10,400			
1962			12,500	1,899,400	564,800	
1963			16,500	2,324,700	358,300	
1964			13,600	2,705,300	532,100	
1965			34,200	2,806,100	372,400	
1966			6,300	288,800	257,400	
1967			2,900	57,300	123,200	
1968			31,100	1,141,100	169,000	
1969			10,900	1,128,100	138,400	
1970	777	63,569	32,519	1,630,404	550,698	2,277,967
1971	1,305	225,162	16,906	1,423,528	855,916	2,522,817
1972	673	45,174	7,999	60,270	212,505	326,621
1973	159	58,207	6,571	38,500	91,810	195,247
1974	557	171,700	9,362	100,179	71,430	353,228
1975	0	3,449	67	55,395	29,928	88,839
1976	14	20,707	213	2,342,600	121,282	2,484,816
1977	35	60,669	2,108	1,443,245	126,762	1,632,819
1978	222	74,839	60,771	5,500,177	423,532	6,059,541
1979	1,049	283,352	356,562	6,409,584	378,712	7,429,259
1980	1,569	371,638	273,328	6,335,159	843,988	7,825,682
1981	4,415	316,945	161,899	4,581,643	1,201,454	6,266,356
1982	2,566	177,160	254,798	5,016,065	1,171,508	6,622,097
1983	12,833	522,913	127,157	2,771,744	917,198	4,351,845
1984	4,913	525,275	310,910	10,668,889	1,312,347	12,822,334
1985	724	294,782	170,046	4,323,885	912,580	5,702,017
1986	3,586	687,525	235,852	3,739,423	1,394,332	6,060,718
1987	3,935	463,090	224,740	1,191,512	929,782	2,813,059
1988	7,011	716,964	505,278	6,864,600	1,381,796	9,475,649
1989	4,225	909,393	441,397	7,089,895	538,177	8,983,087
1990	6,164	1,039,265	305,509	2,346,043	715,940	4,412,921
1991	2,807	570,688	313,210	9,977,423	797,890	11,662,018
1992	4,040	870,687	414,933	9,117,479	880,066	11,287,205
1993	4,301	639,412	214,020	9,843,962	513,579	11,215,274

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Appendix D.13. (page 3 of 3)

Year	Number of Salmon					
	Chinook	Sockeye	Coho ^a	Pink	Chum	Total
1994	1,726	541,108	250,079	6,648,470	1,593,590	9,034,973
1995	2,079	824,679	254,581	16,123,733	1,172,964	18,378,036
1996	2,124	392,038	267,494	1,810,624	411,581	2,883,861
1997	1,352	630,008	111,872	1,697,989	283,929	2,725,150
1998	2,100	882,078	153,694	7,566,341	465,907	9,070,120
1999	1,619	1,403,036	192,480	8,412,751	567,929	10,577,815
Average 1979-98						
	3,676	582,950	267,368	6,206,223	890,866	7,951,083
Average 1989-98						
	3,092	729,936	272,679	7,222,196	737,362	8,965,265
Average 1978-92						
	4,004	521,634	277,093	5,728,901	919,953	7,451,586
Average 1993-97						
	2,316	605,449	219,609	7,224,956	795,129	8,847,459

^a Assumes all South Peninsula coho are caught during post June fisheries and that the Aleutian Islands Management Area contribution is negligible.

Appendix D.14. South Peninsula post June commercial chinook salmon harvest by gear and year, July 1- October 31, 1970-99.

Year	Purse Seine		Drift Gillnet		Set Gillnet		Total
	Number	Percent	Number	Percent	Number	Percent	
1970	750	96.5	19	2.4	8	1.0	777
1971	1,219	93.4	47	3.6	39	3.0	1,305
1972	647	96.1	8	1.2	18	2.7	673
1973	155	97.5	1	0.6	3	1.9	159
1974	509	91.4	22	3.9	26	4.7	557
1975	0	0.0	0	0.0	0	0.0	0
1976	5	35.7	1	7.1	8	57.1	14
1977	18	51.4	0	0.0	17	48.6	35
1978	204	91.9	0	0.0	18	8.1	222
1979	981	93.5	2	0.2	66	6.3	1,049
1980	1,495	95.3	0	0.0	74	4.7	1,569
1981	4,280	96.9	0	0.0	135	3.1	4,415
1982	2,294	89.4	90	3.5	182	7.1	2,566
1983	12,552	97.8	78	0.6	203	1.6	12,833
1984	4,338	88.3	161	3.3	414	8.4	4,913
1985	625	86.3	24	3.3	75	10.4	724
1986	3,395	94.7	24	0.7	167	4.7	3,586
1987	3,700	94.0	64	1.6	171	4.3	3,935
1988	6,586	93.9	142	2.0	283	4.0	7,011
1989	3,584	84.8	295	7.0	346	8.2	4,225
1990	5,605	90.9	122	2.0	437	7.1	6,164
1991	2,085	74.3	62	2.2	660	23.5	2,807
1992	3,724	92.2	47	1.2	269	6.7	4,040
1993	3,666	85.2	111	2.6	524	12.2	4,301
1994	1,321	76.5	25	1.4	380	22.0	1,726
1995	1,556	74.8	34	1.6	489	23.5	2,079
1996	1,839	86.6	28	1.3	257	12.1	2,124
1997	1,161	85.9	18	1.3	173	12.8	1,352
1998	1,768	84.2	18	0.9	314	15.0	2,100
1999	1,367	84.4	15	0.9	237	14.6	1,619
Average 1979-98							
	3,328	90.5	67	1.8	281	7.6	3,676
Average 1989-98							
	2,631	85.1	76	2.5	385	12.4	3,092
Average 1978-92							
	3,697	92.3	74	1.8	233	5.8	4,004
Average 1993-97							
	1,909	82.4	43	1.9	365	15.7	2,316

Appendix D.15. South Peninsula post June commercial sockeye salmon harvest by gear and year, July 1- October 31, 1970-99.

Year	Purse Seine		Drift Gillnet		Set Gillnet		Total
	Number	Percent	Number	Percent	Number	Percent	
1970	28,397	44.7	15,364	24.2	19,808	31.2	63,569
1971	82,826	36.8	105,274	46.8	37,062	16.5	225,162
1972	18,957	42.0	15,580	34.5	10,637	23.5	45,174
1973	15,796	27.1	16,246	27.9	26,165	45.0	58,207
1974	63,511	37.0	52,481	30.6	55,708	32.4	171,700
1975	1,642	47.6	0	0.0	1,807	52.4	3,449
1976	9,630	46.5	2,649	12.8	8,428	40.7	20,707
1977	32,051	52.8	0	0.0	28,618	47.2	60,669
1978	57,448	76.8	0	0.0	17,391	23.2	74,839
1979	193,629	68.3	1,097	0.4	88,626	31.3	283,352
1980	260,433	70.1	398	0.1	110,807	29.8	371,638
1981	171,658	54.2	1,388	0.4	143,899	45.4	316,945
1982	92,784	52.4	13,472	7.6	70,904	40.0	177,160
1983	258,763	49.5	19,005	3.6	245,145	46.9	522,913
1984	240,959	45.9	26,698	5.1	257,618	49.0	525,275
1985	178,953	60.7	18,441	6.3	97,388	33.0	294,782
1986	412,251	60.0	30,261	4.4	245,013	35.6	687,525
1987	238,678	51.5	39,360	8.5	185,052	40.0	463,090
1988	423,852	59.1	44,657	6.2	248,455	34.7	716,964
1989	470,465	51.7	86,343	9.5	352,585	38.8	909,393
1990	524,630	50.5	132,907	12.8	381,728	36.7	1,039,265
1991	232,338	40.7	21,721	3.8	316,629	55.5	570,688
1992	443,201	50.9	44,935	5.2	382,551	43.9	870,687
1993	288,648	45.1	23,421	3.7	327,343	51.2	639,412
1994	147,337	27.2	18,134	3.4	375,637	69.4	541,108
1995	368,688	44.7	21,505	2.6	434,486	52.7	824,679
1996	80,819	20.6	5,776	1.5	305,443	77.9	392,038
1997	123,940	19.7	24,278	3.9	481,790	76.5	630,008
1998	381,734	43.3	35,569	4.0	464,775	52.7	882,078
1999	680,344	48.5	35,100	2.5	687,592	49.0	1,403,036
Average 1979-98							
	276,688	47.5	30,468	5.2	275,794	47.3	582,950
Average 1989-98							
	306,180	41.9	41,459	5.7	382,297	52.4	729,936
Average 1978-92							
	280,003	53.7	32,046	6.1	209,586	40.2	521,634
Average 1993-97							
	201,886	33.3	18,623	3.1	384,940	63.6	605,449

Appendix D.16 South Peninsula post June commercial coho salmon harvest by gear and year, July 1-October 31, 1970-99.

Year	<u>Purse Seine</u>		<u>Drift Gillnet</u>		<u>Set Gillnet</u>		Total
	Number	Percent	Number	Percent	Number	Percent	
1970	31,789	97.8	56	0.2	674	2.1	32,519
1971	16,346	96.7	356	2.1	204	1.2	16,906
1972	7,795	97.4	59	0.7	145	1.8	7,999
1973	6,286	95.7	43	0.7	242	3.7	6,571
1974	8,091	86.4	1,110	11.9	161	1.7	9,362
1975	37	56.1	0	0.0	29	43.9	66
1976	53	24.9	0	0.0	160	75.1	213
1977	1,034	49.1	0	0.0	1,074	50.9	2,108
1978	57,842	95.2	0	0.0	2,929	4.8	60,771
1979	346,021	97.0	33	0.0	10,508	2.9	356,562
1980	249,602	91.3	0	0.0	23,726	8.7	273,328
1981	155,653	96.1	10	0.0	6,236	3.9	161,899
1982	219,462	86.1	19,202	7.5	16,134	6.3	254,798
1983	109,822	86.4	3,658	2.9	13,677	10.8	127,157
1984	247,342	79.6	37,805	12.2	25,763	8.3	310,910
1985	128,931	75.8	18,033	10.6	23,082	13.6	170,046
1986	203,505	86.3	18,901	8.0	13,446	5.7	235,852
1987	169,763	75.5	30,445	13.5	24,532	10.9	224,740
1988	389,723	77.1	75,445	14.9	40,110	7.9	505,278
1989	305,558	69.2	88,376	20.0	47,463	10.8	441,397
1990	224,354	73.4	42,659	14.0	38,496	12.6	305,509
1991	199,104	63.6	51,215	16.4	62,891	20.1	313,210
1992	294,100	70.9	58,621	14.1	62,212	15.0	414,933
1993	148,565	69.4	26,364	12.3	39,091	18.3	214,020
1994	161,903	64.7	24,980	10.0	63,196	25.3	250,079
1995	185,974	73.1	26,020	10.2	42,587	16.7	254,581
1996	197,800	73.9	22,561	8.4	47,133	17.6	267,494
1997	47,254	42.2	19,855	17.7	44,763	40.0	111,872
1998	83,205	54.1	30,219	19.7	40,270	26.2	153,694
1999	143,560	74.6	11,734	6.1	37,186	19.3	192,480
Average 1979-98							
	203,382	76.1	29,720	11.1	34,266	12.8	267,368
Average 1989-98							
	184,782	67.8	39,087	14.3	48,810	17.9	272,679
Average 1978-92							
	220,052	79.4	29,627	10.7	27,414	9.9	277,093
Average 1993-97							
	148,299	67.5	23,956	10.9	47,354	21.6	219,609

Appendix D.17. South Peninsula post June commercial pink salmon harvest by gear and year, July 1- October 31, 1970-99.

Year	Purse Seine		Drift Gillnet		Set Gillnet		Total
	Number	Percent	Number	Percent	Number	Percent	
1970	1,551,475	95.2	62,666	3.8	16,263	1.0	1,630,404
1971	1,414,696	99.4	1,983	0.1	6,849	0.5	1,423,528
1972	55,667	92.4	129	0.2	4,474	7.4	60,270
1973	34,463	89.5	545	1.4	3,492	9.1	38,500
1974	88,832	88.7	1,626	1.6	9,721	9.7	100,179
1975	54,435	98.3	0	0.0	960	1.7	55,395
1976	2,337,109	99.8	65	0.0	5,426	0.2	2,342,600
1977	1,427,176	98.9	0	0.0	16,069	1.1	1,443,245
1978	5,470,855	99.5	0	0.0	29,322	0.5	5,500,177
1979	6,306,410	98.4	16,635	0.3	86,539	1.4	6,409,584
1980	6,236,027	98.4	12	0.0	99,120	1.6	6,335,159
1981	4,461,879	97.4	7,200	0.2	112,564	2.5	4,581,643
1982	4,852,553	96.7	50,748	1.0	112,764	2.2	5,016,065
1983	2,688,187	97.0	5,586	0.2	77,971	2.8	2,771,744
1984	10,324,380	96.8	78,575	0.7	265,934	2.5	10,668,889
1985	4,096,285	94.7	21,803	0.5	205,797	4.8	4,323,885
1986	3,602,769	96.3	27,772	0.7	108,882	2.9	3,739,423
1987	1,135,252	95.3	3,025	0.3	53,235	4.5	1,191,512
1988	6,427,823	93.6	145,106	2.1	291,671	4.2	6,864,600
1989	6,641,815	93.7	85,946	1.2	362,134	5.1	7,089,895
1990	2,256,837	96.2	32,089	1.4	57,117	2.4	2,346,043
1991	9,614,533	96.4	26,740	0.3	336,150	3.4	9,977,423
1992	8,616,933	94.5	91,106	1.0	409,440	4.5	9,117,479
1993	9,494,663	96.5	12,037	0.1	337,262	3.4	9,843,962
1994	6,317,708	95.0	53,701	0.8	277,061	4.2	6,648,470
1995	15,404,768	95.5	41,868	0.3	677,097	4.2	16,123,733
1996	1,523,636	84.1	17,593	1.0	269,395	14.9	1,810,624
1997	1,627,495	95.8	14,435	0.9	56,059	3.3	1,697,989
1998	6,803,002	89.9	192,352	2.5	570,987	7.5	7,566,341
1999	8,016,735	95.3	12,045	0.1	383,971	4.6	8,412,751
Average 1979-98							
	5,921,648	95.4	46,216	0.7	238,359	3.8	6,206,223
Average 1989-98							
	6,830,139	94.6	56,787	0.8	335,270	4.6	7,222,196
Average 1978-92							
	5,515,503	96.3	39,490	0.7	173,909	3.0	5,728,901
Average 1993-97							
	6,873,654	95.1	27,927	0.4	323,375	4.5	7,224,956

Appendix D.18. South Peninsula post June commercial chum salmon harvest by gear and year, July 1-October 31, 1970-99.

Year	Purse Seine		Drift Gillnet		Set Gillnet		Total
	Number	Percent	Number	Percent	Number	Percent	
1970	497,990	90.4	31,764	5.8	20,944	3.8	550,698
1971	715,354	83.6	124,539	14.6	16,023	1.9	855,916
1972	144,992	68.2	55,615	26.2	11,898	5.6	212,505
1973	73,249	79.8	10,464	11.4	8,097	8.8	91,810
1974	51,538	72.2	13,998	19.6	5,894	8.3	71,430
1975	29,336	98.0	0	0.0	592	2.0	29,928
1976	118,482	97.7	1,390	1.1	1,410	1.2	121,282
1977	114,058	90.0	0	0.0	12,704	10.0	126,762
1978	403,352	95.2	0	0.0	20,180	4.8	423,532
1979	346,006	91.4	2,834	0.7	29,872	7.9	378,712
1980	758,344	89.9	8	0.0	85,636	10.1	843,988
1981	1,104,569	91.9	4,821	0.4	92,064	7.7	1,201,454
1982	1,060,812	90.6	17,406	1.5	93,290	8.0	1,171,508
1983	829,281	90.4	19,913	2.2	68,004	7.4	917,198
1984	1,186,753	90.4	30,941	2.4	94,653	7.2	1,312,347
1985	828,645	90.8	18,521	2.0	65,414	7.2	912,580
1986	1,300,638	93.3	22,294	1.6	71,400	5.1	1,394,332
1987	811,464	87.3	43,115	4.6	75,203	8.1	929,782
1988	1,228,987	88.9	68,066	4.9	84,743	6.1	1,381,796
1989	417,978	77.7	44,605	8.3	75,594	14.0	538,177
1990	600,040	83.8	46,700	6.5	69,200	9.7	715,940
1991	635,031	79.6	25,465	3.2	137,394	17.2	797,890
1992	776,939	88.3	29,252	3.3	73,875	8.4	880,066
1993	448,204	87.3	17,871	3.5	47,504	9.2	513,579
1994	1,458,898	91.5	26,262	1.6	108,430	6.8	1,593,590
1995	1,039,506	88.6	22,517	1.9	110,941	9.5	1,172,964
1996	315,357	76.6	14,306	3.5	81,918	19.9	411,581
1997	239,619	84.4	13,278	4.7	31,032	10.9	283,929
1998	333,693	71.6	35,723	7.7	96,491	20.7	465,907
1999	427,414	75.3	21,247	3.7	119,268	21.0	567,929
Average 1979-98							
	786,038	88.2	25,195	2.8	79,633	8.9	890,866
Average 1989-98							
	626,527	85.0	27,598	3.7	83,238	11.3	737,362
Average 1978-92							
	819,256	89.1	24,929	2.7	75,768	8.2	919,953
Average 1993-97							
	700,317	88.1	18,847	2.4	75,965	9.6	795,129

Appendix D.19. Shumagin Islands Section post June commercial salmon harvest, all gear combined, by species and year, July 1-October 31, 1970-99.

Year	Permit	Landing	Number of Salmon					Total
			Chinook	Sockeye	Coho	Pink	Chum	
1970	50	512	735	22,219	30,065	486,657	116,392	656,068
1971	52	737	1,135	45,681	16,067	471,965	300,509	835,357
1972	44	431	619	18,070	7,686	34,047	97,606	158,028
1973	28	259	148	19,484	6,068	19,315	43,154	88,169
1974	37	205	507	43,484	8,031	35,706	37,323	125,051
1975	^a	^a	^a	^a	^a	^a	^a	^a
1976	42	127	0	3	3	303,422	7,968	311,396
1977	^a	^a	^a	^a	^a	^a	^a	^a
1978	69	643	189	51,261	40,433	1,213,961	164,930	1,470,774
1979	91	956	910	145,369	313,573	2,071,045	93,527	2,624,424
1980	86	1,239	1,456	235,438	233,501	1,625,784	283,432	2,379,611
1981	92	893	4,038	118,139	126,955	1,364,370	309,726	1,923,228
1982	89	964	1,969	67,269	207,273	1,638,712	295,325	2,210,548
1983	92	864	6,547	108,365	92,403	900,726	220,824	1,328,865
1984	90	858	3,222	96,149	211,648	1,786,737	259,497	2,357,253
1985	109	932	511	107,792	113,193	1,627,627	205,649	2,054,772
1986	99	1,352	3,149	341,966	201,518	1,497,905	557,407	2,601,945
1987	120	1,210	3,388	248,934	157,936	542,383	310,540	1,263,181
1988	120	2,041	5,955	416,917	351,118	3,396,332	415,308	4,585,630
1989	140	1,565	2,446	416,425	248,760	2,023,468	238,627	2,929,726
1990	138	1,439	4,916	423,253	182,128	1,102,353	344,096	2,056,746
1991	135	1,318	1,396	212,091	142,846	2,140,838	211,667	2,708,838
1992	128	1,424	2,657	250,306	230,425	2,287,338	233,954	3,004,680
1993	110	1,007	2,334	195,451	124,423	3,326,530	121,102	3,769,840
1994	115	986	949	152,702	147,602	1,126,688	249,939	1,677,880
1995	116	1,274	1,674	295,690	161,292	5,325,186	302,541	6,086,383
1996	103	852	1,578	93,161	203,004	703,409	134,780	1,135,932
1997	79	355	974	107,752	43,854	184,751	26,079	363,410
1998	107	1,475	1,505	353,650	83,032	1,900,291	133,114	2,471,592
1999	102	1,960	1,410	724,778	143,244	3,546,717	269,842	4,685,991
Average 1978-98								
	106	1,126	2,465	211,337	172,234	1,799,354	243,432	2,428,822
Average 1989-98								
	117	1,170	2,043	250,048	156,737	2,012,085	199,590	2,620,503
Average 1978-92								
	107	1,180	2,850	215,978	190,247	1,681,305	276,301	2,366,681
Average 1993-97								
	105	895	1,502	168,951	136,035	2,133,313	166,888	2,606,689

^a Confidentiality requirements prohibit reporting of harvest.

Appendix D.20. Southeastern District (minus the Southeastern District Mainland fishery July 1 -25 salmon harvest) post June commercial salmon harvest, all gear combined, by species and year, July 1-October 31, 1970-99.

Year	Permit ^a	Landing	Number of Salmon					Total
			Chinook	Sockeye	Coho	Pink	Chum	
1970	62	638	736	23,040	31,195	657,415	151,122	863,508
1971	63	1,017	1,190	55,178	16,332	818,831	439,095	1,330,626
1972	58	489	650	22,875	7,859	44,190	115,152	190,726
1973	38	322	149	25,110	6,272	27,143	49,900	108,574
1974	53	339	522	71,648	8,128	67,791	50,615	198,704
1975	13	11	0	213	34	237	274	758
1976	64	295	0	3,665	201	579,646	31,103	614,615
1977	60	252	11	20,407	2,076	205,572	20,582	248,648
1978	77	916	198	58,137	47,081	1,899,575	226,733	2,231,724
1979	104	1,322	951	182,949	332,572	3,257,929	167,441	3,941,842
1980	103	1,679	1,515	292,025	253,680	2,024,405	443,529	3,015,154
1981	107	1,522	4,086	176,792	137,342	2,476,913	554,649	3,349,782
1982	109	1,588	2,116	98,555	223,931	2,371,602	549,297	3,245,501
1983	114	1,780	7,566	280,995	109,633	1,073,412	388,933	1,860,539
1984	123	1,962	3,759	263,720	240,108	3,124,821	423,861	4,056,269
1985	119	1,677	556	170,640	128,289	2,604,099	296,027	3,199,611
1986	115	1,887	3,337	403,744	205,988	1,952,743	679,646	3,245,458
1987	134	1,777	3,624	303,610	181,894	919,099	533,817	1,942,044
1988	127	2,788	6,096	500,764	390,211	4,491,452	607,241	5,995,764
1989	145	2,587	3,518	609,495	321,855	4,818,537	364,236	6,117,641
1990	149	2,133	5,305	615,501	222,923	1,323,270	468,738	2,635,737
1991	142	2,200	1,845	319,019	191,333	4,235,266	394,708	5,142,171
1992	135	2,205	3,118	362,056	285,360	3,268,497	318,082	4,237,113
1993	128	1,926	3,005	315,539	157,250	5,909,612	177,831	6,563,237
1994	134	1,716	1,277	261,324	201,433	1,451,225	367,849	2,283,108
1995	132	2,273	1,841	534,803	207,284	7,380,863	466,744	8,591,535
1996	121	1,444	1,830	170,088	218,649	903,433	180,026	1,474,026
1997	105	832	1,119	210,434	66,120	251,894	39,947	569,514
1998	117	2,484	1,675	515,309	104,035	2,724,915	192,853	3,538,787
1999	115	2,900	1,493	965,317	162,616	4,361,401	318,390	5,809,217
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Average 1978-98	121	1,843	2,778	316,452	201,284	2,783,979	373,438	3,677,931
Average 1989-98	131	1,980	2,453	391,357	197,624	3,226,751	297,101	4,115,287
Average 1978-92	120	1,868	3,173	309,200	218,147	2,656,108	427,796	3,614,423
Average 1993-97	124	1,638	1,814	298,438	170,147	3,179,405	246,479	3,896,284

^a Permits used equals total Southeastern District post June permits.

Appendix D.21. Southeastern District fall fishery (Sep. 1–Oct. 31) commercial salmon harvest, all gear combined, by species and year, 1970-99.

Year	Permits	Landings	Number of Salmon					Total
			Chinook	Sockeye	Coho	Pink	Chum	
1970	0	0	0	0	0	0	0	0
1971	a	a	a	a	a	a	a	a
1972	0	0	0	0	0	0	0	0
1973	0	0	0	0	0	0	0	0
1974	0	0	0	0	0	0	0	0
1975	0	0	0	0	0	0	0	0
1976	4	15	0	1,776	160	85	0	2,021
1977	7	12	0	1,369	304	0	210	1,883
1978	10	27	0	761	1,738	0	2,475	4,974
1979	11	29	0	1,535	1,803	19	3,329	6,686
1980	10	46	0	3,898	5,736	2	1,438	11,074
1981	16	58	0	5,863	1,709	0	0	7,572
1982	19	144	2	18,327	5,108	0	708	24,145
1983	40	235	34	17,791	10,562	59	2,241	30,687
1984	36	188	6	9,374	6,160	144	832	16,516
1985	34	129	5	3,260	6,653	252	1,449	11,619
1986	26	99	1	2,900	3,095	376	1,854	8,226
1987	37	194	8	17,740	12,634	1,092	11,642	43,116
1988	48	225	1	18,682	11,037	61,658	1,935	93,313
1989	50	317	12	32,187	11,389	276	9,413	53,277
1990	47	317	7	53,445	9,348	571	71,357	134,728
1991	38	244	2	19,741	7,751	0	2,673	30,167
1992	42	303	58	13,046	26,700	1,525	3,292	44,621
1993	40	217	31	16,220	7,830	515	2,877	27,473
1994	55	310	18	24,882	30,082	197	15,738	70,917
1995	50	458	3	109,283	22,190	1,710	9,599	142,785
1996	52	344	5	26,038	12,924	136	2,910	42,013
1997	45	490	30	76,068	23,432	3,568	6,174	109,272
1998	60	404	25	42,568	13,999	1,818	10,382	68,792
1999	54	495	12	117,902	15,270	12,353	3,581	149,118
Average 1989 - 1998								
	48	340	19	41,348	16,565	1,032	13,442	72,405
Average 1979 - 1998								
	38	238	12	25,642	11,507	3,696	7,992	48,850

^a Confidentiality requirements prohibit reporting harvest.

Appendix D.22. South Central, Southwestern, and Unimak districts, combined, post June commercial salmon harvest, all gear combined, by species and year, July 1-October 31, 1970-99.

Year	Permits	Landings	Number of Salmon					Total
			Chinook	Sockeye	Coho	Pink	Chum	
1970	111	968	29	24,990	2,170	1,095,513	413,685	1,536,387
1971	162	1,469	129	153,473	764	900,752	538,527	1,593,645
1972	109	442	47	20,653	240	22,785	107,895	151,620
1973	99	365	3	22,751	281	14,044	44,115	81,194
1974	75	396	39	87,134	1,216	35,090	24,098	147,577
1975	40	76	0	506	37	52,612	29,432	82,587
1976	114	957	6	11,683	49	1,943,867	105,874	2,061,479
1977	93	1,164	16	34,980	1,346	1,403,137	117,895	1,557,374
1978	109	1,403	17	11,695	18,744	3,992,186	230,071	4,252,713
1979	136	1,395	71	68,289	31,839	3,780,765	242,278	4,123,242
1980	125	1,349	66	75,635	31,669	4,489,131	395,964	4,992,465
1981	137	1,459	203	98,491	29,909	2,892,995	619,794	3,641,392
1982	150	1,713	393	67,205	39,742	2,761,320	625,634	3,494,294
1983	172	1,680	5,881	207,648	25,450	1,802,299	559,837	2,601,115
1984	199	2,690	1,451	286,445	90,530	8,607,009	931,615	9,917,050
1985	165	1,532	175	137,607	51,147	2,325,343	590,634	3,104,906
1986	155	1,505	204	199,925	31,055	1,965,955	701,215	2,898,354
1987	185	1,201	416	133,751	49,958	511,880	415,865	1,111,870
1988	198	1,966	744	176,577	122,590	2,644,442	767,034	3,711,387
1989	230	1,806	1,029	271,072	128,518	3,161,629	207,146	3,769,394
1990	220	1,669	688	440,975	72,228	1,041,483	235,594	1,790,968
1991	158	1,373	578	146,855	120,492	5,717,405	394,247	6,379,577
1992	176	1,702	885	403,519	129,449	5,833,131	545,423	6,912,407
1993	145	1,160	519	182,394	52,566	3,856,097	327,063	4,418,639
1994	150	1,586	365	146,765	47,633	5,188,806	1,223,245	6,606,814
1995	140	1,550	159	195,867	44,805	8,686,233	688,117	9,615,181
1996	74	521	71	45,453	42,477	834,266	198,733	1,121,000
1997	88	566	85	114,709	44,366	1,429,476	237,609	1,826,245
1998	137	1,491	118	249,638	46,700	4,716,396	263,125	5,275,977
1999	118	1,305	87	390,525	28,969	4,008,498	244,880	4,672,959
Average 1970-75								
	99	619	41	51,585	785	353,466	192,959	598,835
Average 1976-98								
	150	1,454	615	161,182	54,490	3,460,228	461,914	4,138,428
Average 1989-98								
	149	1,339	417	235,252	68,928	4,043,038	415,017	4,762,651

Appendix D.23. South Central, Southwestern, and Unimak districts fall (Sep. 1–Oct. 31)
commercial salmon harvest, all gear combined, by species and year, 1970-99.

Year	Permits	Landings	Chinook	Sockeye	Coho	Pink	Chum	Total
1970	b	b	b	b	b	b	b	b
1971	0	0	0	0	0	0	0	0
1972	b	b	b	b	b	b	b	b
1973	0	0	0	0	0	0	0	0
1974	0	0	0	0	0	0	0	0
1975	0	0	0	0	0	0	0	0
1976	0	0	0	0	0	0	0	0
1977	b	b	b	b	b	b	b	b
1978	12	24	0	47	2,913	0	3,251	6,211
1979	14	31	0	840	15,665	35	1,978	18,518
1980	23	93	0	2,615	24,654	152	2,728	30,149
1981	20	57	0	4,141	19,307	0	220	23,668
1982	15	69	0	6,144	5,634	0	2,699	14,477
1983	17	99	1	7,702	4,383	1,195	717	13,998
1984	26	81	4	3,977	4,366	314	957	9,618
1985	26	53	0	742	8,072	38	5,511	14,363
1986	22	47	1	559	3,223	142	665	4,590
1987	37	129	4	5,592	9,406	407	40,437	55,846
1988	32	103	3	5,953	15,460	632	17,410	39,458
1989	16	46	0	2,745	4,335	5	645	7,730
1990	33	109	0	13,697	13,970	13	1,838	29,518
1991	14	29	0	315	12,586	0	13,510	26,411
1992	11	30	0	69	8,623	0	194	8,886
1993	10	31	0	166	9,135	0	41	9,342
1994	23	63	0	599	6,481	97	198,436	205,613
1995	5	15	0	1,374	3,893	0	261	5,528
1996	5	20	0	263	13,601	0	0	13,864
1997	6	23	0	897	13,015	0	25	13,937
1998	7	26	0	2,207	6,839	0	0	9,046
1999	4	8	0	162	2,352	0	87	2,601
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Average 1989 - 1998	13	39	0	2,233	9,248	12	21,495	32,988
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Average 1979 - 1998	18	58	1	3,030	10,132	152	14,414	27,728

^b Confidentiality requirements prohibit reporting harvest.

Appendix E.1. Method for calculating indexed total escapement.

The basic methods for calculating estimated indexed total escapements without the use of a weir or tower are as follows:

Sockeye, Coho: These species tend to have a much longer stream life than pink and chum salmon. Therefore, the indexed total escapement is usually the peak escapement count, including carcasses.

At Thin Point Lagoon and Lake, estimates of sockeye in the lagoon are added together based on estimated time in lagoon, condition, and observations of when sockeye start to move from the lagoon to the lake.

In Morzhovoi (Middle Lagoon), Bluebill, Outer Marker, and Mortensen's Lagoon systems the escapement is estimated by adding together biweekly estimates of spawning sockeye.

Pink and Chum Salmon: An approximate 21-day stream life is used to calculate total pink and chum escapements. Fish in saltwater during the final survey are added:

EXAMPLE

Survey Date	Pink	Chum	Fish at Mouth
July 10	5,000	0	5,000 P
July 17	25,000	0	10,000 P
August 1	100,000	0	10,000 P
August 15	150,000	0	12,000 P
			1,000 CH
September 1	150,000	5,000	2,000 CH
Estimated Total	255,000	7,000	

The estimate of 21 days stream life was used because significant numbers of carcasses seem to appear about three weeks after adult pinks and chums first appear in Alaska Peninsula streams. It is recognized that stream life can vary, however this method is easily duplicated and is comparable from year to year. Variation in stream life is likely a much smaller factor than variation between observers.

With the exception of several small streams, there are no problems of streams being obscured by brush or trees in the Alaska Peninsula and Aleutian Islands Areas. With several exceptions, visibility of spawning grounds is outstanding during periods of normal water flow and clear weather.

Appendix E.2. Historical sockeye salmon escapement summary for Orzinski Lake, Thin Point Lake and Middle Lagoon/Morzhovoi weirs.

Year	Orzinski Weir			Thin Point Weir			Middle Lagoon/Morzhovoi Weir		
	Dates		Sockeye	Dates		Sockeye	Dates		Sockeye
	Installed	Removed		Installed	Removed		Installed	Removed	
1926							unknown	unknown	13,590
1927							unknown	unknown	23,932
1928	no records found prior to 1929 for this weir						unknown	unknown	8,904
1929	unknown	unknown	5,740				unknown	unknown	15,974
1930	unknown	unknown	1,923				unknown	unknown	24,551
1931	unknown	unknown	5,756				1-Jul	7-Sep	28,588
1932	20-Jun	unknown	25,706				26-Jun	8-Aug	40,306
1933	not operated this year						not operated this year		
1934	23-Jun	"mid-season"	6,634				23-Jun	8-Sep	81,748
1935	13-Jun	"mid-September"	28,478				10-Jun	5-Oct	17,367
1936	16-Jun	8-Aug	31,720				not operated again successfully until 1996		
1937	before 19-Jun	6-Aug	15,393						
1938	30-May	7-Aug	8,675						
1939	14-Jun	3-Aug	10,414						
1940	7-Jun	5-Aug	16,414						
1941	14-Jun	8-Aug	8,241						
1942-1989	no weirs operated on the South Peninsula								
1990	27-Jun	7-Aug	13,467						
1991	14-Jun	20-Jul	35,219						
1992	12-Jun	31-Jul	20,542						
1993	9-Jun	3-Aug	22,287	not operated before 1994					
1994	10-Jun	29-Jul	34,540	13-Jul	28-Aug	19,450			
1995	16-Jun	25-Jul	24,907	14-Jul	22-Aug	10,241			
1996	7-Jun	28-Jul	23,744	17-Jul	17-Aug	3,101	9-Jul	17-Aug	10,123
1997	12-Jun	26-Jul	24,938	7-Aug	24-Aug	1,488	not operated after 1996		
1998	14-Jun	1-Aug	21,194	15-Jul	23-Aug	1,927			
1999	12-Jun	31-Jul	12,579	not operated in 1999					

^a Data from weirs prior to 1960 compiled from United States Fish and Wildlife Service annual reports series from 1930 to 1959 for the Alaska Peninsula/ Aleutians.

Appendix E.3. South Peninsula total indexed salmon escapements by species and year, 1962-99.

Year	Sockeye	Coho	Pink	Chum	Total
1962	18,800		1,598,800	399,400	2,017,000
1963	23,000		1,317,900	446,700	1,787,600
1964	15,700		1,436,400	454,800	1,906,900
1965	12,100		1,035,400	228,000	1,275,500
1966	17,000		719,400	422,000	1,158,400
1967	16,200		445,500	182,900	644,600
1968	12,800		823,300	279,100	1,115,200
1969	29,500		2,474,900	134,600	2,639,000
1970	16,500		1,298,900	280,500	1,595,900
1971	19,400		702,700	343,200	1,065,300
1972	11,900		111,400	254,500	377,800
1973	7,300		110,800	212,500	330,600
1974	95,600		284,400	257,300	637,300
1975	51,700		552,100	193,300	797,100
1976	69,700		1,456,400	327,200	1,853,300
1977	64,900		2,677,800	774,900	3,517,600
1978	64,800		2,858,700	600,500	3,524,000
1979	53,300		2,629,500	411,100	3,093,900
1980	45,900		2,641,600	362,400	3,049,900
1981	45,700		2,307,500	381,300	2,734,500
1982	39,200		2,293,000	386,900	2,719,100
1983	59,200		851,200	446,500	1,356,900
1984	54,800		3,811,600	699,700	4,566,100
1985	49,900		1,614,100	503,500	2,167,500
1986	48,000		1,716,700	544,600	2,309,300
1987	44,600		1,540,500	620,700	2,205,800
1988	74,100		2,839,600	496,400	3,410,100
1989	78,100		1,870,900	310,500	2,259,500
1990	95,300	87,500 ^a	1,598,400	354,700	2,048,400 ^b
1991	124,900		2,946,800	587,600	3,659,300
1992	97,600		2,834,400	335,500	3,267,500
1993	100,341		2,990,140	397,030	3,487,511
1994	120,255		3,071,725	579,100	3,771,080
1995	129,110		6,406,300	726,400	7,261,810
1996	72,950		3,647,550	610,300	4,330,800
1997	104,440		5,243,275	809,050	6,156,765
1998	85,440		4,668,065	742,235	5,495,740
1999	97,000		5,015,000	725,000	5,837,000
Average 1962-76 ^c	27,813		957,887	294,400	1,280,100

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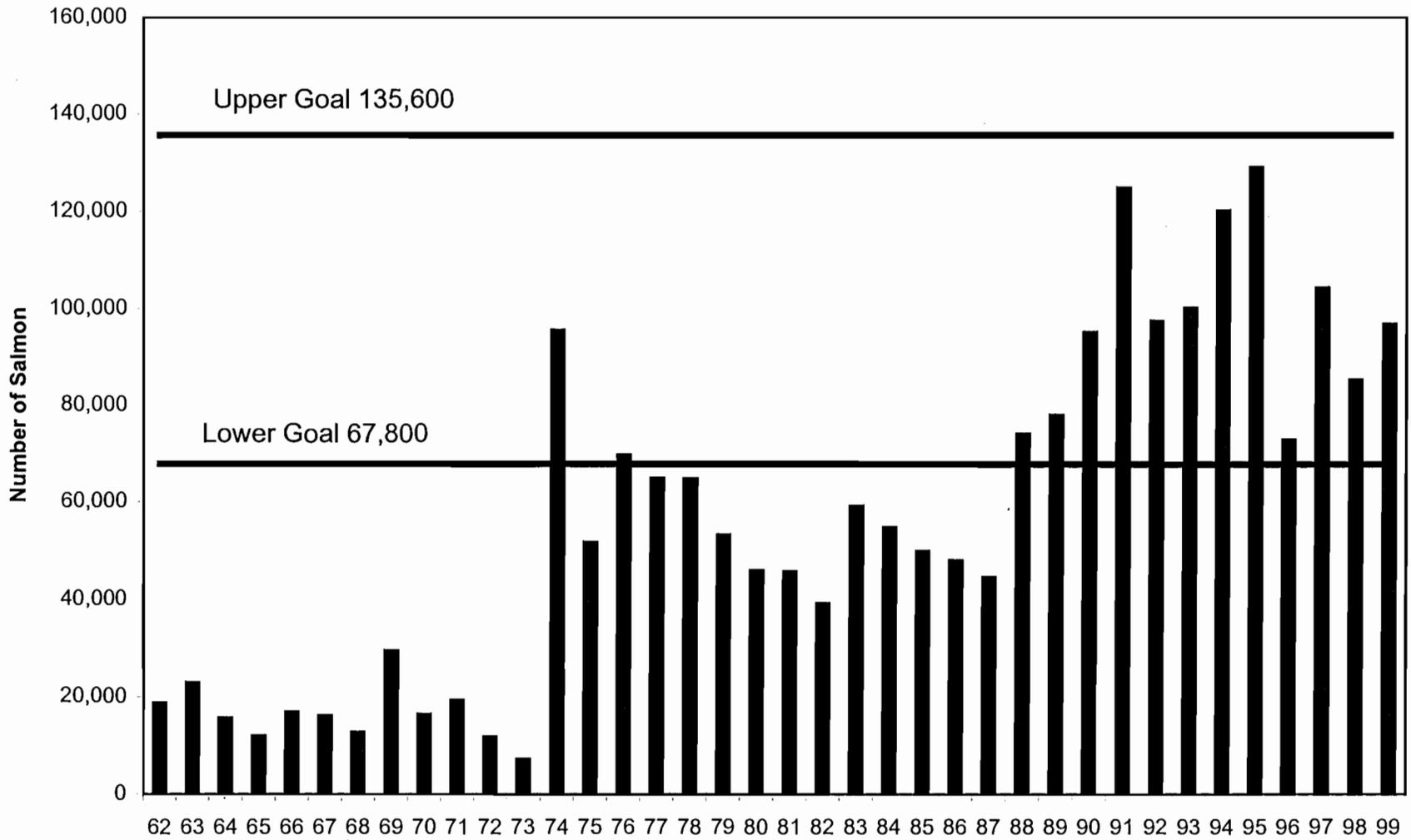
Appendix E.3. (page 2 of 2)

Year	Sockeye	Coho	Pink	Chum	Total
Average 1977-98 ^c	75,129	87,500	2,866,334	530,951	3,472,414
Average 1989-98	100,844	87,500	3,527,756	545,242	4,173,841

^a In 1990, excellent survey conditions and a additional funding allowed coho surveys during mid and late September.

^b The 1990 coho numbers are not included in the total escapement.

^c The averages used in this table reflect the transition from years of low production (1962-76) to the most recent production trends (post 1976).



Appendix E.4. South Peninsula total indexed sockeye salmon escapement by year, 1962-99.

Appendix E.5. Sockeye salmon daily and cumulative escapement counts
through the Orzinski Lake weir, 1999

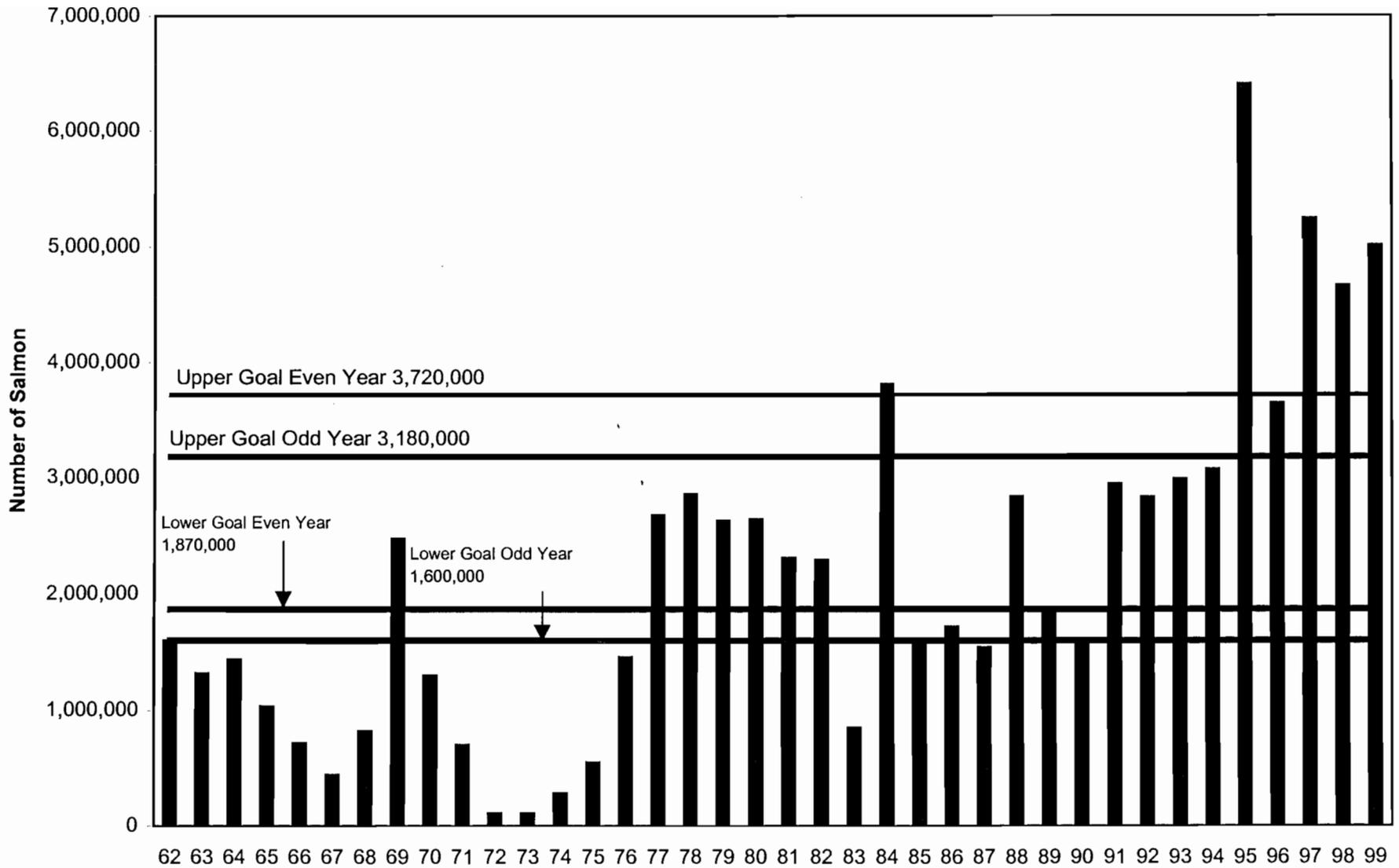
Date	Daily			Cumulative		
	Adults	Jacks	Total	Adults	Jacks	Total
June 12-15	0	0	0	0	0	0
16-Jun	1	1	2	1	1	2
17-Jun	0	0	0	1	1	2
18-Jun	3	0	3	4	1	5
19-Jun	2	0	2	6	1	7
20-Jun	5	0	5	11	1	12
21-Jun	10	0	10	21	1	22
22-Jun	10	0	10	31	1	32
23-Jun	4	1	5	35	2	37
24-Jun	8	1	9	43	3	46
25-Jun	32	4	36	75	7	82
26-Jun	31	3	34	106	10	116
27-Jun	80	6	86	186	16	202
28-Jun	20	1	21	206	17	223
29-Jun	40	3	43	246	20	266
30-Jun	1	0	1	247	20	267
1-Jul	212	64	276	459	84	543
2-Jul	4	0	4	463	84	547
3-Jul	58	7	65	521	91	612
4-Jul	185	9	194	706	100	806
5-Jul	239	13	252	945	113	1,058
6-Jul	30	4	34	975	117	1,092
7-Jul	101	11	112	1,076	128	1,204
8-Jul	17	6	23	1,093	134	1,227
9-Jul	1,243	46	1,289	2,336	180	2,516
10-Jul	79	10	89	2,415	190	2,605
11-Jul	1,029	81	1,110	3,444	271	3,715
12-Jul	776	70	846	4,220	341	4,561
13-Jul	1,208	81	1,289	5,428	422	5,850
14-Jul	729	111	840	6,157	533	6,690
15-Jul	471	85	556	6,628	618	7,246
16-Jul	271	63	334	6,899	681	7,580
17-Jul	289	78	367	7,188	759	7,947
18-Jul	750	64	814	7,938	823	8,761

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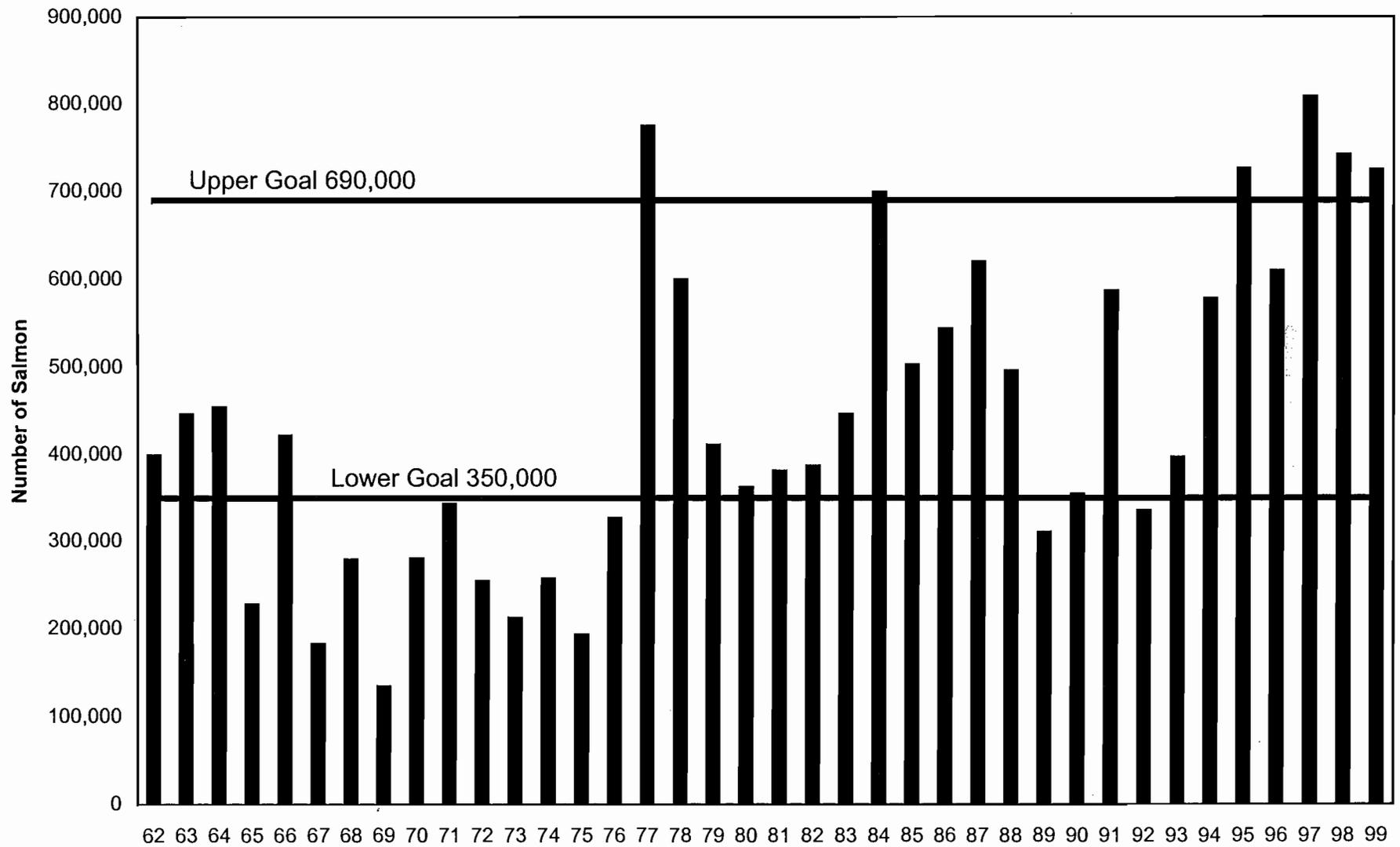
Appendix E.5. (page 2 of 2)

Date	Daily			Cumulative		
	Adults	Jacks	Total	Adults	Jacks	Total
19-Jul	21	8	29	7,959	831	8,790
20-Jul	122	53	175	8,081	884	8,965
21-Jul	22	101	123	8,103	985	9,088
22-Jul	87	79	166	8,190	1,064	9,254
23-Jul	173	74	247	8,363	1,138	9,501
24-Jul	384	187	571	8,747	1,325	10,072
25-Jul	344	102	446	9,091	1,427	10,518
26-Jul	266	177	443	9,357	1,604	10,961
27-Jul	521	135	656	9,878	1,739	11,617
28-Jul	65	37	102	9,943	1,776	11,719
29-Jul	189	295	484	10,132	2,071	12,203
30-Jul	230	146	376	10,362	2,217	12,579
Post July 30 ^a	1,562	859	2,421	11,694	2,930	14,624
Total	11,924	3,076	15,000	11,924	3,076	15,000

^a July 30 was the last day salmon were counted through the weir. Post July 30 escapement was based on aerial surveys and adult to jack salmon ratios for the week of July 25-31.



Appendix E. 6. South Peninsula total indexed pink salmon escapement by year, 1962-99.



Appendix E. 7. South Peninsula total indexed chum salmon escapement by year, 1962-99.

Appendix E.8. South Peninsula total indexed salmon escapements by species, district, and section, 1999.^a

District & Section	Sockeye	Pink	Chum	Total
Southeastern District				
East Stepovak	0	167,500	0	167,500
Stepovak Flats	0	14,700	60,250	74,950
Northwest Stepovak	15,000	374,300	8,300	397,600
Southwest Stepovak	0	142,950	0	142,950
Balboa Bay	0	196,780	7,000	203,780
Beaver Bay	0	85,650	6,000	91,650
Shumagin Islands	<u>4,280</u>	<u>570,000</u>	<u>1,000</u>	<u>575,280</u>
Southeastern District Total	19,280	1,551,880	82,550	1,653,710
South Central District				
Mino Creek-Little Coal Bay	1,500	867,100	0	868,600
East Pavlof Bay	0	471,000	500	471,500
Canoe Bay	11,000	459,000	197,000	667,000
West Pavlof Bay	<u>2,800</u>	<u>14,100</u>	<u>56,000</u>	<u>72,900</u>
South Central District Total	15,300	1,811,200	253,500	2,080,000
Southwestern District				
Volcano Bay	0	261,900	112,430	374,330
Belkofski Bay	0	391,400	99,100	490,500
Deer Island	0	767,200	0	767,200
Cold Bay	5,620	98,130	131,800	235,550
Thin Point	20,500	59,900	28,700	109,100
Morzhovoi Bay	24,600	20,800	15,200	60,600
Ikatan Bay	<u>5,500</u>	<u>22,900</u>	<u>900</u>	<u>29,300</u>
Southwestern District Total	56,220	1,622,230	388,130	2,066,580
Unimak District				
Otter Cove	0	10,750	1,000	11,750
Sanak Island*	6,000	19,250	0	25,250
Unimak District Total	6,000	30,000	1,000	37,000
*Sanak Island are rough estimates based on escapements in nearby locations.				
Total South Peninsula	96,800	5,015,310	725,180	5,837,290

^a No escapement data is available for coho salmon.

Appendix F.1. Salmon escapement survey counts in the South Peninsula area, 1999.

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
Dorenoi Bay Sw, 281-1001										
	08/06/1999		Stream	F	0	0	0	3,400	0	
		Dan Connolly	Mouth	F	0	0	0	0	0	
			Bay	F	0	0	0	1,500	0	
	08/09/1999		Stream	G	0	0	0	12,000	0	
		Dan Connolly	Mouth	F	0	0	0	0	0	
			Bay	F	0	0	0	0	0	
	08/18/1999		Stream	G	0	0	0	7,300	0	
		Dan Connolly	Mouth	G	0	0	0	5,500	0	
			Bay	G	0	0	0	0	0	
	09/02/1999		Stream	P	0	0	0	8,000	0	SURVEYED LOWER HALF OF RIVER.
		Witteveen	Mouth	F	0	0	0	0	0	
			Bay	F	0	0	0	0	0	
	09/03/1999		Stream	F	0	0	0	11,000	0	
		Dan Connolly	Mouth	F	0	0	0	800	0	
			Bay							
Dorenoi Bay Ne River, 281-1002										
	08/06/1999		Stream	P	0	0	0	0	0	VERY TURBID. NOTHING SEEN
		Dan Connolly	Mouth	P	0	0	0	0	0	
			Bay	F	0	0	0	0	0	
	08/09/1999		Stream	G	0	0	0	400	0	SURVEYED LOWER 2 MILES ONLY
		Dan Connolly	Mouth	G	0	0	0	0	0	
			Bay	F	0	0	0	0	0	
	08/18/1999		Stream	G	0	0	0	1,400	0	SOME SALMON ABOVE DRY STRETCH OF STREAM
		Dan Connolly	Mouth	G	0	0	0	250	0	
			Bay	G	0	0	0	0	0	
	09/02/1999		Stream	G	0	0	0	7,000	0	PLUS 700 CARCASSES.
		Witteveen	Mouth	F	0	0	0	0	0	
			Bay	F	0	0	0	0	0	
Suzy Creek, 281-1003										
	07/14/1999		Stream	G	0	0	0	0	0	SURVEYED ABOUT ONE MILE OF RIVER.
		Witteveen	Mouth	G	0	0	0	200	0	
			Bay	G	0	0	0	0	0	

-Continued-

Appendix F.1. (page 2 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
Witteveen	07/21/1999		Stream	P	0	0	0	200	0	VERY TURBULENT AT 1200 FEET, SURVEYED 1/4 MILE OF RIVER ONLY.
			Mouth	P	0	0	0	150	0	
			Bay	P	0	0	0	0	0	
Dan Connolly	07/26/1999		Stream	G	0	0	0	200	0	
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
Witteveen	07/31/1999		Stream	F	0	0	0	5,000	0	SURVEYED ONLY LOWER HALF OR SO FAIRLY HIGH ALTITUDE SURVEY ZERO IN MOUTH
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
Dan Connolly	08/06/1999		Stream	P	0	0	0	31,000	0	FISH WITHIN 1 MILE OF FALLS ON SUZY CREEK.
			Mouth	P	0	0	0	0	0	
			Bay	F	0	0	0	0	0	
Dan Connolly	08/09/1999		Stream	F	0	0	0	17,000	0	SURVEYED LOWER 5 MILES OF RIVER ONLY, WINDY AND FOGGY.
			Mouth	F	0	0	0	1,500	0	
			Bay							
Witteveen	08/14/1999		Stream	F	0	0	0	43,000	0	MOSTLY IN LOWER HALF, FAST AND DARK SURVEY.
			Mouth	F	0	0	0	300	0	
			Bay	F	0	0	0	0	0	
Dan Connolly	08/18/1999		Stream	G	0	0	0	43,000	0	
			Mouth	G	0	0	0	4,000	0	
			Bay	G	0	0	0	0	0	
Dan Connolly	08/23/1999		Stream	G	0	0	0	77,000	0	
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
Witteveen	09/02/1999		Stream	G	0	0	0	73,000	0	PLUS 35,000 CARCASSES, HIGH SLOW SURVEY.
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
Witteveen	07/14/1999	West Cove, 281-1004	Stream	G	0	0	0	0	0	SURVEYED TWO MILES.
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
Dan Connolly	07/26/1999		Stream	G	0	0	0	0	0	
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	

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Appendix F.1. (page 3 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
07/31/1999 Witteveen	Stream	G	0	0	0	0	0	0	ZERO	
	Mouth	G	0	0	0	0	0	0		
	Bay	G	0	0	0	0	0	0		
08/09/1999 Dan Connolly	Stream	P	0	0	0	300	0	POOR VISIBILITY MURKY AND DARK.		
	Mouth	P	0	0	0	600	0			
	Bay									
08/18/1999 Dan Connolly	Stream	G	0	0	0	400	0			
	Mouth	G	0	0	0	200	0			
	Bay	G	0	0	0	0	0			
09/03/1999 Witteveen	Stream	G	0	0	0	17,000	500	PLUS 3,000 CARCASSES.		
	Mouth	G	0	0	0	1,000	0			
	Bay	G	0	0	0	0	0			
Chichagof Lgn. Only, 281-20 09/03/1999 Witteveen	Stream	G	0	0	300	9,000	0	FISH IN MAIN ENTRANCE AND SMALL TRIBS.		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
Chichagof Bay W Side, 281-2001 07/14/1999 Witteveen	Stream	G	0	0	0	50	0	SURVEYED ONE MILE.		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
07/26/1999 Dan Connolly	Stream	G	0	0	0	0	0			
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
07/31/1999 Witteveen	Stream	G	0	0	0	500	0			
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
08/06/1999 Dan Connolly	Stream	P	0	0	0	150	0	POOR VIS. TURBID.		
	Mouth	P	0	0	0	0	0			
	Bay	F	0	0	0	0	0			
08/09/1999 Dan Connolly	Stream	G	0	0	0	1,200	0	SURVEYED LOWER 3 MILES ONLY.		
	Mouth	F	0	0	0	0	0			
	Bay	F	0	0	0	4,000	0			
08/18/1999 Dan Connolly	Stream	G	0	0	0	3,200	0	RAN INTO FOG AT MOUTH		
	Mouth									
	Bay									

144

Appendix F.1. (page 4 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
09/03/1999 Witteveen	Stream	G	0	0	0	31,000	0	PLUS 5,000 CARCASSES.		
	Mouth	G	0	0	0	500	0			
	Bay	G	0	0	0	15,000	0			
Chichagof Bay Stream, 281-2002										
07/26/1999 Dan Connolly	Stream	E	0	0	0	0	0	JUMPERS AT MOUTH.		
	Mouth	G	0	0	0	1,500	0			
	Bay	G	0	0	0	0	0			
07/31/1999 Witteveen	Stream	G	0	0	0	0	0			
	Mouth	G	0	0	0	300	0			
	Bay	G	0	0	0	0	0			
08/06/1999 Dan Connolly	Stream	F	0	0	0	1,800	0	600 IN UPPER STREAM, 1200 IN LOWER.		
	Mouth	P	0	0	0	1,000	0			
	Bay									
08/18/1999 Dan Connolly	Stream	G	0	0	0	1,600	0			
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
09/03/1999 Witteveen	Stream	G	0	0	0	18,000	0			
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
Chichagof Bay E Side, 281-2003										
07/14/1999 Witteveen	Stream	G						SURVEYED MOUTH ONLY.		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
07/26/1999 Dan Connolly	Stream	G	0	0	0	0	0			
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
07/31/1999 Witteveen	Stream	G	0	0	0	0	0	ZERO		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
08/06/1999 Dan Connolly	Stream	F	0	0	0	0	0	NOTHING		
	Mouth	F	0	0	0	0	0			
	Bay	F	0	0	0	0	0			
08/18/1999 Dan Connolly	Stream	G	0	0	0	300	0			
	Mouth	G	0	0	0	200	0			
	Bay	G	0	0	0	0	0			

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Appendix F.1. (page 5 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
09/03/1999 Witteveen	Stream	G	0	0	0	12,000	0	PLUS 2,000 CARCASSES.		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
Windbound Bay, 281-2004										
07/14/1999 Witteveen	Stream	G						SURVEYED MOUTH ONLY.		
	Mouth	G	0	0	0	20	0			
	Bay	G	0	0	0	0	0			
07/26/1999 Dan Connolly	Stream	E	0	0	0	0	0			
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
07/31/1999 Witteveen	Stream	F	0	0	0	0	0			
	Mouth	G	0	0	0	100	0			
	Bay	G	0	0	0	0	0			
08/06/1999 Dan Connolly	Stream	G	0	0	0	1,400	0	SOME GLARE, BUT GENERALLY GOOD VIS. SURVEYED TO FALLS.		
	Mouth	G	0	0	0	200	0			
	Bay	G	0	0	0	0	0			
08/13/1999 Dan Connolly	Stream	G	0	0	0	900	0	400 PINKS JUST ENTERING STREAM FROM MOUTH.		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
08/23/1999 Dan Connolly	Stream	F	0	0	0	750	0	DARK, AROUND 50 CARCASSES VISIBLE		
	Mouth	G	0	0	0	2,000	0			
	Bay	G	0	0	0	0	0			
09/03/1999 Witteveen	Stream	G	0	0	0	11,000	0	PLUS 1,500 CARCASSES.		
	Mouth	G	0	0	0	2,000	0			
	Bay	G	0	0	0	0	0			
Orzinski Bay, 281-3103										
08/06/1999 Dan Connolly	Stream	G	0	1,200	0	1,500	0			
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
08/23/1999 Dan Connolly	Stream	G	0	200	0	5,400	0	200 REDS IN STREAM PROBABLY SPAWNERS. NOTHING IN TRIBUTARY STREAM YET.		
	Mouth	G	0	0	0	8,000	0			
	Bay	G	0	0	0	9,000	0			
09/03/1999 Witteveen	Stream	G	0	15,000	0	11,000	0	SOCKEYE IN TRIBS AND SHOALS, PINKS MOSTLY IN RIVER.		
	Mouth	G	0	0	0	2,000	0			
	Bay	G	0	0	0	0	0			

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Appendix F.1. (page 6 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
Little Norway, 281-3204										
	08/06/1999	Dan Connolly	Stream	G	0	0	0	600	300	COUNTED 900 SALMON, ONE THIRD OF WHICH WERE CHUM.
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
	08/23/1999	Dan Connolly	Stream	F	0	0	0	1,200	700	LOW LIGHT
			Mouth	G	0	0	0	2,500	0	
			Bay	G	0	0	0	0	0	
	09/03/1999	Witteveen	Stream	G	0	0	0	9,000	1,000	
			Mouth	F	0	0	0	3,500	0	
			Bay	F	0	0	0	6,000	0	
Clark Bay Sw, 281-3205										
	08/06/1999	Dan Connolly	Stream	F	0	0	0	300	0	
			Mouth	F	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
	08/23/1999	Dan Connolly	Stream	F	0	0	0	1,600	0	
			Mouth	G	0	0	0	7,000	0	
			Bay	G	0	0	0	0	0	
	09/03/1999	Witteveen	Stream	G	0	0	0	8,000	0	ALL FISH IN LOWER 1/2 MILE.
			Mouth	F	0	0	0	10,000	0	
			Bay	F	0	0	0	0	0	
Clark Bay Ne, 281-3206										
	08/06/1999	Dan Connolly	Stream	F	0	0	0	0	0	NOTHING
			Mouth	F	0	0	0	0	0	
			Bay	F	0	0	0	0	0	
	08/23/1999	Dan Connolly	Stream	G	0	0	0	0	0	NOTHING, DRY
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
	09/03/1999	Witteveen	Stream	G	0	0	0	0	0	STREAM IS DRY.
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
Grub Gulch, 281-3207										
	07/14/1999	Witteveen	Stream	P	0	0	0	0	0	RIVER VISIBILITY NEAR ZERO
			Mouth	P	0	0	0	0	0	
			Bay	F	0	0	0	0	0	

-Continued-

Appendix F.1. (page 7 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
07/31/1999 Witteveen	Stream	F	0	0	0	1,000	0	SURVEYED ONLY CLEAR EAST FORK.		
	Mouth	F	0	0	0	0	0			
	Bay	F	0	0	0	0	0			
08/06/1999 Dan Connolly	Stream	P	0	0	0	200	1,500	TURBID, POOR VIS.		
	Mouth	P	0	0	0	0	0			
	Bay	F	0	0	0	0	0			
08/13/1999 Dan Connolly	Stream							FISH SCHOOLED THROUGHOUT BAY. WINDY AND MURKY IN STREAM, NO SURVEY.		
	Mouth									
	Bay	G	0	0	0	17,000	0			
08/23/1999 Dan Connolly	Stream	G	0	0	0	11,200	2,000	APPROX. 20 SCHOOLS IN BAY		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	15,000	0			
08/28/1999 Dan Connolly	Stream	G	0	0	0	33,000	5,000	CHUM IN UPPER STREAM.		
	Mouth									
	Bay									
1st Stm N Rock Wall, 281-3301										
07/14/1999 Witteveen	Stream	P	0	0	0	0	0	RIVER VISIBILITY NEAR ZERO. SURVEYED TWO MILES OF RIVER.		
	Mouth	P	0	0	0	0	0			
	Bay	F	0	0	0	0	0			
08/06/1999 Dan Connolly	Stream	P	0	0	0	0	0	NOTHING		
	Mouth	F	0	0	0	0	0			
	Bay	F	0	0	0	0	0			
08/23/1999 Dan Connolly	Stream	P	0	0	0	0	1,500	CLEAR TRIBS ONLY.		
	Mouth	P	0	0	0	0	0			
	Bay	F	0	0	0	0	0			
09/03/1999 Witteveen	Stream	P	0	0	0	0	15,000	VERY MURKY, SAW ALL FISH IN SHALLOW WATERS.		
	Mouth	F	0	0	0	0	0			
	Bay	F	0	0	0	0	0			
2nd Stm N Rock Wall, 281-3302										
07/14/1999 Witteveen	Stream	P	0	0	0	0	0	RIVER VISIBILITY NEAR ZERO. SURVEYED TWO MILES OF RIVER.		
	Mouth	P	0	0	0	0	0			
	Bay	F	0	0	0	0	0			
07/31/1999 Witteveen	Stream	P	0	0	0	0	0	ZERO VISIBILITY		
	Mouth	P	0	0	0	0	0			
	Bay	P	0	0	0	0	0			

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Appendix F.1. (page 8 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
08/06/1999 Dan Connolly	Stream	F	0	0	0	0	1,500			
	Mouth	F	0	0	0	0	0			
	Bay	F	0	0	0	0	0			
08/23/1999 Dan Connolly	Stream	P	0	0	0	0	700	CLEAR TRIBS ONLY.		
	Mouth	P	0	0	0	0	0			
	Bay	F	0	0	0	0	0			
09/03/1999 Witteveen	Stream	P	0	0	0	0	0	VERY MURKY, UNSURVEYABLE.		
	Mouth	F	0	0	0	0	0			
	Bay	F	0	0	0	2,000	0			
Louie's Corner, 281-3303 07/14/1999 Witteveen	Stream	P	0	0	0	0	0	RIVER VISIBILITY NEAR ZERO. SURVEYED TWO MILES OF RIVER.		
	Mouth	P	0	0	0	0	0			
	Bay	F	0	0	0	0	0			
07/31/1999 Witteveen	Stream	P	0	0	0	600	0	FISH WERE SEEN IN THE ONLY CLEAR TRIB.		
	Mouth	P	0	0	0	0	0			
	Bay	F	0	0	0	0	0			
08/06/1999 Dan Connolly	Stream	P	0	0	0	0	0	POOR VIS. NOTHING SEEN		
	Mouth	P	0	0	0	0	0			
	Bay	P	0	0	0	0	0			
08/13/1999 Dan Connolly	Stream							6000 PINKS JUST OFF MUD LINE IN BAY BETWEEN 33.01 AND 33.03. NO SURVEY OF STREAM POSSIBLE.		
	Mouth									
	Bay	G	0	0	0	6,000	0			
08/23/1999 Dan Connolly	Stream	F	0	0	0	800	2,400			
	Mouth	F	0	0	0	0	5,000			
	Bay	G	0	0	0	0	0			
08/28/1999 Dan Connolly	Stream	G	0	0	0	1,000	4,600	GOOD VIS. IN CLEAR SECTIONS.		
	Mouth	G	0	0	0	0	3,000			
	Bay									
Big River, 281-3304 07/14/1999 Witteveen	Stream	P	0	0	0	100	0	MOST OF RIVER WAS MURKY, SOME TRIBUTARIES CLEAR. SURVEYED ABOUT 4 MILES OF CLEAR TRIBUTARIES.		
	Mouth	P	0	0	0	0	0			
	Bay	F	0	0	0	0	0			
07/31/1999 Witteveen	Stream	P	0	0	0	1,400	0	SURVEYED FEW UPPER CLEAR TRIBS ONLY.		
	Mouth	P	0	0	0	0	300			
	Bay	P	0	0	0	0	20,000			

-Continued-

Appendix F.1. (page 9 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
08/06/1999 Dan Connolly	Stream	P	0	0	0	400	0	FISH IN EAST FORK.		
	Mouth	P	0	0	0	0	0			
	Bay	F	0	0	0	0	0			
08/13/1999 Dan Connolly	Stream	P	0	0	0	600	300	POOR CONDITIONS VERY TURBID SURVEY, 1 EAST AND 1 WEST TRIBS. ONLY.		
	Mouth	P	0	0	0	0	0			
	Bay	P	0	0	0	0	0			
08/23/1999 Dan Connolly	Stream	F	0	0	0	600	400	CLEAR TRIBS ONLY.		
	Mouth	F	0	0	0	0	4,000			
	Bay	G	0	0	0	0	0			
08/28/1999 Dan Connolly	Stream	P	0	0	0	800	2,500	GOOD VIS. ON CLEAR TRIBS.		
	Mouth	G	0	0	0	0	2,000			
	Bay	F	0	0	0	0	0			
09/11/1999 Dan Connolly	Stream	F	0	0	0	1,000	4,500	1,000 CARCASSES. CLEAR TRIBS AND SECTIONS OF RIVER ONLY.		
	Mouth									
	Bay									
Stepovak River, 281-3305										
07/31/1999 Witteveen	Stream							SAW A LOT OF JUMPERS AND A LOT OF ACTIVITY (SEALS, ETC.) BUT VISIBILITY WAS NEAR ZERO.		
	Mouth									
	Bay	P	0	0	0	0	2,000			
08/06/1999 Dan Connolly	Stream	P	0	0	0	0	450	MOST OF THE RIVER VERY TURBID. W. TRIB CLEAR 300 CHUM. E. TRIB. NEAR AIRSTRIP 150 CHUMS.		
	Mouth	P	0	0	0	0	0			
	Bay	P	0	0	0	0	0			
08/23/1999 Dan Connolly	Stream	P	0	0	0	200	400	CLEAR TRIBS ONLY.		
	Mouth	F	0	0	0	0	0			
	Bay	F	0	0	0	0	0			
08/28/1999 Dan Connolly	Stream	P	0	0	0	200	4,700	CLEAR UPPER TRIBS INCLUDED. CARCASSES IN TRIBS.		
	Mouth	F	0	0	0	0	0			
	Bay	F	0	0	0	0	0			
09/11/1999 Dan Connolly	Stream	F	0	0	0	2,000	17,000	CLEAR TRIBS ONLY. 2,000 CARCASSES.		
	Mouth									
	Bay									
Granville Portage, 281-3306										
08/06/1999 Dan Connolly	Stream	P	0	0	0	0	0	POOR VIS. VERY DARK, BAY VERY TURBID.		
	Mouth	P	0	0	0	0	0			
	Bay	P	0	0	0	0	0			

150

-Continued-

Appendix F.1. (page 10 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
	08/23/1999	Dan Connolly	Stream Mouth Bay	P	0	0	0	0	100	STREAM VERY DARK, POOR VIS.
	09/11/1999	Dan Connolly	Stream Mouth Bay	F	0	0	0	800	1,200	
Granville Bay, 281-3401	08/06/1999	Dan Connolly	Stream Mouth Bay	F P G	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	TURBID OUTLET, STREAM FAIR VIS. WITH LIGHT BOTTOM, NO FISH.
	08/12/1999	Witteveen	Stream Mouth Bay	G G G	0 0 0	0 0 0	0 0 0	350 0 0	0 0 0	
	08/23/1999	Dan Connolly	Stream Mouth Bay	G G G	0 0 0	0 0 0	0 0 0	500 100 0	0 0 0	GOOD VIS.
	09/02/1999	Witteveen	Stream Mouth Bay	G G G	0 0 0	0 0 0	0 0 0	500 0 0	0 0 0	
	09/11/1999	Dan Connolly	Stream Mouth Bay	F G	0 0	0 0	100 0	9,000 0	2,000 0	1,000 CARCASSES. COHO AT STREAM ENTRANCE.
Osterback's Creek, 281-3402	08/06/1999	Dan Connolly	Stream Mouth Bay	G G G	0 0 0	0 0 0	0 0 0	200 0 0	0 0 0	CLEAR WATER
	08/12/1999	Witteveen	Stream Mouth Bay	F G G	0 0 0	0 0 0	0 0 0	400 0 0	0 0 0	JUMPER IN MOUTH, TURBULENT SURVEY, DIFFICULT TO SEE.
	08/23/1999	Dan Connolly	Stream Mouth Bay	G G G	0 0 0	0 0 0	0 0 0	400 200 600	0 0 0	
	09/02/1999	Witteveen	Stream Mouth Bay	G G G	0 0 0	0 0 0	0 0 0	15,000 1,000 0	0 0 0	PLUS 500 CARCASSES.

-Continued-

Appendix F.1. (page 11 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
09/11/1999 Dan Connolly	Stream	F	0	0	300	12,000	0	300 COHO AT ENTRANCE OF STREAM. 2,000 CARCASSES.		
	Mouth	G	0	0	0	0	0			
	Bay									
Stonehouse, 281-3403 08/06/1999 Dan Connolly	Stream	P	0	0	0	0	0	MUDDY AND TURBID		
	Mouth	P	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
08/12/1999 Witteveen	Stream	G	0	0	0	200	0			
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
08/23/1999 Dan Connolly	Stream	G	0	0	0	7,000	0	6000 WERE IN ENTRANCE.		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
09/02/1999 Witteveen	Stream	G	0	0	0	18,000	0	PLUS 1,000 CARCASSES, MISSED EAST FORK.		
	Mouth	G	0	0	0	4,000	0			
	Bay	G	0	0	0	0	0			
09/11/1999 Dan Connolly	Stream	F	0	0	0	23,000	0	7,000 CARCASSES		
	Mouth	G	0	0	0	7,000	0			
	Bay									
Island Bay 3404, 281-3404 08/06/1999 Dan Connolly	Stream	G	0	0	0	100	0			
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
08/12/1999 Witteveen	Stream	G	0	0	0	300	0			
	Mouth	G	0	0	0	500	0			
	Bay	G	0	0	0	0	0			
08/23/1999 Dan Connolly	Stream	P	0	0	0	0	0	NOTHING SEEN IN STREAM, VERY BRUSHY		
	Mouth	G	0	0	0	1,000	0			
	Bay	G	0	0	0	0	0			
09/02/1999 Witteveen	Stream	G	0	0	0	2,500	0	PLUS 500 CARCASSES.		
	Mouth	G	0	0	0	3,000	0			
	Bay	G	0	0	0	0	0			
09/11/1999 Dan Connolly	Stream	G	0	0	0	2,200	0	1,000 CARCASSES.		
	Mouth	G	0	0	0	500	0			
	Bay									

-Continued-

Appendix F.1. (page 12 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
Island Bay 3405, 281-3405										
	08/06/1999		Stream	G	0	0	0	0	0	NOTHING
		Dan Connolly	Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
	08/12/1999		Stream	G	0	0	0	500	0	FISH IN MOUTH SAME AS 281-3406
		Witteveen	Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
	08/23/1999		Stream	G	0	0	0	600	0	
		Dan Connolly	Mouth	G	0	0	0	2,500	0	
			Bay	G	0	0	0	0	0	
	09/02/1999		Stream	G	0	0	0	18,000	0	PLUS 700 CARCASSES, 15,000 IN MOUTH (SAME AS 3405)
		Witteveen	Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
	09/11/1999		Stream	G	0	0	0	16,000	0	SAME MOUTH AS 3406. 4,000 CARCASSES.
		Dan Connolly	Mouth	G	0	0	0	0	0	
			Bay							
Island Bay 3406, 281-3406										
	08/06/1999		Stream	G	0	0	0	0	0	NOTHING
		Dan Connolly	Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
	08/12/1999		Stream	G	0	0	0	300	0	FISH IN MOUTH SAME AS 281-3405
		Witteveen	Mouth	G	0	0	0	1,500	0	
			Bay	G	0	0	0	0	0	
	08/23/1999		Stream	G	0	0	0	300	0	SAME MOUTH AS 3405
		Dan Connolly	Mouth	G	0	0	0	2,500	0	
			Bay	G	0	0	0	0	0	
	09/02/1999		Stream	G	0	0	0	5,000	0	PLUS 500 CARCASSES, 15,000 IN MOUTH (SAME MOUTH AS 3405)
		Witteveen	Mouth	G	0	0	0	15,000	0	
			Bay	G	0	0	0	0	0	
	09/11/1999		Stream	G	0	0	0	7,000	0	2,000 CARCASSES.
		Dan Connolly	Mouth	G	0	0	0	10,000	0	
			Bay							

-Continued-

Appendix F.1. (page 13 of 65)

Stream	Date	Observer	Location	Visi- bility	Species				Observer Remarks	
					Chinook	Sockeye	Coho	Pink		Chum
Island Bay 3407, 281-3407										
	08/06/1999		Stream	P	0	0	0	0	0	NOTHING
		Dan Connolly	Mouth	G	0	0	0	0	0	
			Bay	F	0	0	0	0	0	
	08/12/1999		Stream	G	0	0	0	0	0	
		Witteveen	Mouth	G	0	0	0	300	0	
			Bay	G	0	0	0	0	0	
	08/23/1999		Stream	F	0	0	0	0	0	DARK STREAM
		Dan Connolly	Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	200	0	
	09/02/1999		Stream	G	0	0	0	1,800	0	DIFFICULT TO SEE DUE TO BRUSH.
		Witteveen	Mouth	G	0	0	0	2,500	0	
			Bay	G	0	0	0	0	0	
	09/11/1999		Stream	G	0	0	0	1,600	0	500 CARCASSES.
		Dan Connolly	Mouth	G	0	0	0	300	0	
			Bay							
Island Bay 3408, 281-3408										
	08/06/1999		Stream	F	0	0	0	0	0	
		Dan Connolly	Mouth	F	0	0	0	0	0	
			Bay	F	0	0	0	0	0	
	08/12/1999		Stream	G	0	0	0	0	0	HIGH ALITUDE SURVEY.
		Witteveen	Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
	08/23/1999		Stream	F	0	0	0	100	0	
		Dan Connolly	Mouth	G	0	0	0	100	0	
			Bay	G	0	0	0	0	0	
	09/02/1999		Stream	G	0	0	0	1,500	0	
		Witteveen	Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
	09/11/1999		Stream	G	0	0	0	1,800	0	200 CARCASSES.
		Dan Connolly	Mouth	G	0	0	0	2,000	0	
			Bay							

-Continued-

Appendix F.1. (page 14 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
Fox Bay 3501, 281-3501										
	09/02/1999		Stream	G	0	0	0	200	0	
		Witteveen	Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
Fox Bay 3502, 281-3502										
	08/06/1999		Stream	P	0	0	0	0	0	
		Dan Connolly	Mouth	P	0	0	0	0	0	
			Bay	F	0	0	0	0	0	
	08/12/1999		Stream	G	0	0	0	300	0	HIGH ALTITUDE SURVEY.
		Witteveen	Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
	08/23/1999		Stream	G	0	0	0	1,100	0	APPROX 400 CARCASSES.
		Dan Connolly	Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
	09/02/1999		Stream	G	0	0	0	28,000	0	PLUS 3,000 CARCASSES.
		Witteveen	Mouth	G	0	0	0	5,000	0	
			Bay	G	0	0	0	0	0	
	09/11/1999		Stream	G	0	0	0	33,000	0	10,000 CARCASSES.
		Dan Connolly	Mouth	G	0	0	0	0	0	
			Bay							
Fox Bay 3504, 281-3504										
	08/06/1999		Stream	P	0	0	0	450	0	FISH IN LOWER HALF MILE OF STREAM
		Dan Connolly	Mouth	F	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
	08/12/1999		Stream	G	0	0	0	0	0	
		Witteveen	Mouth	G	0	0	0	400	0	
			Bay	G	0	0	0	0	0	
	08/23/1999		Stream	F	0	0	0	500	0	
		Dan Connolly	Mouth	F	0	0	0	150	0	
			Bay	G	0	0	0	0	0	
	09/02/1999		Stream	G	0	0	0	1,200	0	PLUS 700 CARCASSES.
		Witteveen	Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	

-Continued-

Appendix F.1. (page 15 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
	09/11/1999	Dan Connolly	Stream	F	0	0	0	11,000	0	2,000 CARCASSES
	Mouth		G	0	0	0	0	0		
	Bay									
Fox Bay 3505, 281-3505	08/06/1999	Dan Connolly	Stream	P	0	0	0	0	0	NOTHING
	Mouth		F	0	0	0	0	0		
	Bay		G	0	0	0	0	0		
	08/12/1999	Witteveen	Stream	P	0	0	0	0	0	TURBULENT SURVEY, DIFFICULT TO SEE.
	Mouth		G	0	0	0	0	0		
	Bay		G	0	0	0	0	0		
	08/23/1999	Dan Connolly	Stream	F	0	0	0	0	0	
	Mouth		F	0	0	0	100	0		
	Bay		G	0	0	0	300	0		
Boulder Bay, 281-3506	08/06/1999	Dan Connolly	Stream	F	0	0	0	0	0	NOTHING
	Mouth		G	0	0	0	0	0		
	Bay		G	0	0	0	0	0		
	08/12/1999	Witteveen	Stream	G	0	0	0	0	0	
	Mouth		G	0	0	0	200	0		
	Bay		G	0	0	0	0	0		
	08/23/1999	Dan Connolly	Stream	F	0	0	0	200	100	
	Mouth		F	0	0	0	300	0		
	Bay		G	0	0	0	400	0		
	09/02/1999	Witteveen	Stream	G	0	0	0	800	0	PLUS 300 CARCASSES, WINDY TURBULENT SURVEY.
	Mouth		G	0	0	0	0	0		
	Bay		G	0	0	0	0	0		
Near Bluff Point, 281-3507	08/06/1999	Dan Connolly	Stream	G	0	0	0	0	0	BLOCKED AT MOUTH FROM LOG AND ROCK DEPOSITS
	Mouth		G	0	0	0	0	0		
	Bay		G	0	0	0	0	0		
	08/12/1999	Witteveen	Stream	G	0	0	0	0	0	MOUTH BLOCKED OFF BY GRAVEL
	Mouth		G	0	0	0	0	0		
	Bay		G	0	0	0	0	0		

-Continued-

Appendix F.1. (page 16 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
08/23/1999 Dan Connolly	Stream	F	0	0	0	0	0	0	BLOCKED AT MOUTH.	
	Mouth	F	0	0	0	200	0			
	Bay	G	0	0	0	0	0			
09/02/1999 Witteveen	Stream	G	0	0	0	0	0	MOUTH BLOCKED.		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
Not Smiley's Creek, 281-7004 07/13/1999 Witteveen	Stream	G						SURVEYED ONLY MOUTH PORTION.		
	Mouth	F	0	0	0	0	0			
	Bay	F								
07/26/1999 Dan Connolly	Stream	F	0	0	0	0	0			
	Mouth	G	0	0	0	300	0			
	Bay	G	0	0	0	0	0			
08/06/1999 Witteveen	Stream	G	0	0	0	150	0	SURVEYED ONLY 3/4 OF RIVER.		
	Mouth	G	0	0	0	200	0			
	Bay	G	0	0	0	0	0			
08/09/1999 Dan Connolly	Stream	F	0	0	0	600	0			
	Mouth	F	0	0	0	0	0			
	Bay	F	0	0	0	0	0			
08/13/1999 Dan Connolly	Stream	G	0	0	0	1,700	0	GOOD CONDITIONS, BUT SOME GLARE ON PART OF THE SURVEY.		
	Mouth	G	0	0	0	100	0			
	Bay	G	0	0	0	0	0			
08/23/1999 Witteveen	Stream	G	0	0	0	20,000	0	GOOD CONDITIONS		
	Mouth	G	0	0	0	3,000	0			
	Bay	G	0	0	0	0	0			
09/03/1999 Dan Connolly	Stream	F	0	0	0	17,500	0	APPROX. 2,000 CARCASSES. LOW LIGHT CONDITIONS.		
	Mouth	F	0	0	0	0	0			
	Bay	F	0	0	0	0	0			
Beaver River, 281-7005 07/13/1999 Witteveen	Stream	F	0	0	0	0	0	SURVEYED TO FORKS.		
	Mouth	F	0	0	0	0	0			
	Bay	F								
07/21/1999 Witteveen	Stream	F	0	0	0	200	0	GOOD VIS. UPPER RIVER, POOR VIS. IN LOWER RIVER, SURVEYED FROM THE FORKS DOWN.		
	Mouth	F	0	0	0	0	0			
	Bay	G	0	0	0	0	0			

-Continued-

Appendix F.1. (page 17 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
07/26/1999 Dan Connolly	Stream	P	0	0	0	500	0	RIVER SILTY, SALMON NEAR FORKS.		
	Mouth	F	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
07/31/1999 Witteveen	Stream	F	0	0	0	500	3,000	MOST OF MAIN STEM WAS MURKY, BUT FISH WERE SEEN IN THE SHALLOWS		
	Mouth	P	0	0	0	0	0			
	Bay	P	0	0	0	0	0			
08/06/1999 Witteveen	Stream	P	0	0	0	100	0	MAIN STEM HAD ZERO VISIBILITY, FISH WERE SEEN IN THE LOWER WEST FORK.		
	Mouth	P	0	0	0	0	0			
	Bay	P	0	0	0	0	0			
08/09/1999 Dan Connolly	Stream	P	0	0	0	2,800	0	WEST TRIBUTARY LESS TURBID, 900 PINKS. LOWER RIVER NEAR MOUTH VERY TURBID, BUT SALMON PRESENT AND SURFACING.		
	Mouth	P	0	0	0	0	0			
	Bay	P	0	0	0	0	0			
08/13/1999 Dan Connolly	Stream	P	0	0	0	1,400	200	W. TRIBUTARY ONLY. TOO MURKY IN REST OF RIVER.		
	Mouth	P	0	0	0	0	0			
	Bay	P	0	0	0	0	0			
08/23/1999 Witteveen	Stream	P	0	0	0	65,000	3,000	MURKY WATERS, COULD BE MANY MORE. POOR SURVEY 30,000 + IN CLEAR TRIBS.		
	Mouth	F	0	0	0	0	0			
	Bay	F	0	0	0	0	0			
09/03/1999 Dan Connolly	Stream	F	0	0	0	35,000	3,000	APPROX. 6,000 CARCASSES.		
	Mouth	F	0	0	0	0	0			
	Bay	F	0	0	0	0	0			
Kagayan Flats, 281-7006 09/12/1999 Witteveen	Stream	G	0	0	0	0	0	SAW 5 PINK CARCASSES.		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
Cape Aliaksin, West, 281-8004 08/06/1999 Witteveen	Stream	G	0	0	0	20	0			
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
08/13/1999 Dan Connolly	Stream	G	0	0	0	5,500	0	GOOD CONDITIONS ON ALL 3 CAPE STREAMS.		
	Mouth	G	0	0	0	2,000	0			
	Bay	G	0	0	0	4,000	0			

-Continued-

Appendix F.1. (page 18 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
08/23/1999 Witteveen	Stream	G	0	0	0	12,000	0			
	Mouth	G	0	0	0	3,000	0			
	Bay	G	0	0	0	4,000	0			
09/02/1999 Witteveen	Stream	G	0	0	0	31,000	0	PLUS 3,000 CARCASSES.		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
Cape Aliaksin, Cntr, 281-8005 08/06/1999 Witteveen	Stream	G	0	0	0	30	0			
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
08/13/1999 Dan Connolly	Stream	G	0	0	0	780	0			
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	3,000	0			
08/23/1999 Witteveen	Stream	G	0	0	0	3,500	0			
	Mouth	G	0	0	0	1,500	0			
	Bay	G	0	0	0	0	0			
09/02/1999 Witteveen	Stream	G	0	0	0	5,000	0	PLUS 500 CARCASSES.		
	Mouth	G	0	0	0	1,000	0			
	Bay	G	0	0	0	0	0			
Cape Aliaksin, East, 281-8006 08/06/1999 Witteveen	Stream	G	0	0	0	50	0			
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
08/13/1999 Dan Connolly	Stream	G	0	0	0	9,200	0			
	Mouth	G	0	0	0	2,000	0			
	Bay	G	0	0	0	0	0			
08/23/1999 Witteveen	Stream	G	0	0	0	13,000	0			
	Mouth	G	0	0	0	2,000	0			
	Bay	G	0	0	0	3,000	0			
09/02/1999 Witteveen	Stream	G	0	0	0	17,000	0	PLUS 3,000 CARCASSES.		
	Mouth	G	0	0	0	500	0			
	Bay	G	0	0	0	0	0			

-Continued-

Appendix F.1. (page 19 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
Lefthand Bay Kagayan, 281-8008										
	07/13/1999		Stream	G	0	0	0	0	0	SURVEYED ONLY TO FORKS.
		Witteveen	Mouth	F	0	0	0	0	0	
			Bay	F						
	07/21/1999		Stream	E	0	0	0	0	0	PERFECT CONDITIONS.
		Witteveen	Mouth	E	0	0	0	200	0	
			Bay	E	0	0	0	0	0	
	07/26/1999		Stream	F	0	0	0	200	0	SALMON IN LOWER SECTION OF STREAM, FAIR VIS.
		Dan Connolly	Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
	07/31/1999		Stream	F	0	0	0	500	0	BAY WAS CHOPPY AND RIVER WAS MURKY
		Witteveen	Mouth	F	0	0	0	0	0	
			Bay	F	0	0	0	0	0	
	08/06/1999		Stream	P	0	0	0	400	0	MAIN STEM HAD ZERO VISIBILITY, FISH WERE IN WEST FORK.
		Witteveen	Mouth	F	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
	08/09/1999		Stream	P	0	0	0	700	0	POOR CONDITIONS, WINDY AND TURBID.
		Dan Connolly	Mouth	P	0	0	0	200	0	
			Bay	P	0	0	0	0	0	
	08/13/1999		Stream							2100 ALONG BEACH, NO SURVEY ON STREAM. TOO TURBID.
		Dan Connolly	Mouth							
			Bay	G	0	0	0	2,100	0	
	08/18/1999		Stream							NO SURVEY OF STREAM, TOO TURBID.
		Dan Connolly	Mouth	F	0	0	0	2,000	0	
			Bay	G	0	0	0	11,000	0	
	08/23/1999		Stream	F	0	0	0	41,000	500	CLEARER IN HEADWATERS, BUT MOST OF RIVER WAS FAIRLY MURKY.
		Witteveen	Mouth	F	0	0	0	500	0	
			Bay	F	0	0	0	0	0	
	09/03/1999		Stream	F	0	0	0	26,000	3,000	APPROX. 2,000 CARCASSES.
		Dan Connolly	Mouth	F	0	0	0	400	0	
			Bay	F	0	0	0	1,000	0	
	09/12/1999		Stream	F	0	0	20	0	0	SURVEYED ONLY 1/2 MILE OF RIVER.
		Witteveen	Mouth	F	0	0	0	0	0	
			Bay	G	0	0	0	0	0	

-Continued-

Appendix F.1. (page 20 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
Foster Creek, 281-8009										
	08/06/1999		Stream	F	0	0	0	500	1,500	
		Witteveen	Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
08/09/1999										
		Dan Connolly	Stream	G	0	0	0	9,800	800	
			Mouth	F	0	0	0	500	0	
			Bay	F	0	0	0	0	0	
08/13/1999										
		Dan Connolly	Stream	G	0	0	0	8,300	400	GOOD CONDITIONS
			Mouth	G	0	0	0	300	0	
			Bay	G	0	0	0	0	0	
08/18/1999										
		Dan Connolly	Stream	G	0	0	0	15,300	0	GOOD CONDITIONS
			Mouth	G	0	0	0	3,500	0	
			Bay	G	0	0	0	0	0	
09/03/1999										
		Dan Connolly	Stream	F	0	0	0	23,000	1,300	LOW LIGHT CONDITIONS. APPROX. 3,000 CARCASSES.
			Mouth	F	0	0	0	0	0	
			Bay	F	0	0	0	0	0	
Monolith Pt. Creek, 281-8011										
	08/06/1999		Stream	F	0	0	0	0	0	NO FISH, BEAR IN RIVER.
		Witteveen	Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
08/09/1999										
		Dan Connolly	Stream	F	0	0	0	200	0	
			Mouth	F	0	0	0	100	0	
			Bay	F	0	0	0	0	0	
08/18/1999										
		Dan Connolly	Stream	G	0	0	0	1,700	0	
			Mouth	G	0	0	0	7,500	0	
			Bay	G	0	0	0	0	0	
09/03/1999										
		Dan Connolly	Stream	F	0	0	0	8,800	0	APPROX. 2,000 CARCASSES.
			Mouth	F	0	0	0	1,200	0	
			Bay	F	0	0	0	0	0	
Foster's Camp Creek, 281-8012										
	08/06/1999		Stream	G	0	0	0	0	0	NO FISH
		Witteveen	Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	

-Continued-

Appendix F.1. (page 21 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
08/09/1999 Dan Connolly	Stream	F	0	0	0	300	0	LOWER 2 MILES ONLY		
	Mouth	G	0	0	0	250	0			
	Bay	F	0	0	0	0	0			
08/18/1999 Dan Connolly	Stream	G	0	0	0	1,300	0			
	Mouth	G	0	0	0	150	0			
	Bay	G	0	0	0	0	0			
09/03/1999 Dan Connolly	Stream	F	0	0	0	2,200	0	APPROX. 200 CARCASSES.		
	Mouth	F	0	0	0	900	0			
	Bay	F	0	0	0	0	0			
Johnson Creek, 281-8014 08/06/1999 Witteveen	Stream	G	0	0	0	400	0			
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
08/09/1999 Dan Connolly	Stream	G	0	0	0	6,200	0	GOOD VIS.		
	Mouth	G	0	0	0	1,500	0			
	Bay	F	0	0	0	0	0			
08/18/1999 Dan Connolly	Stream	G	0	0	0	10,900	0	6700 W. FORK, 4200 E. FORK		
	Mouth	G	0	0	0	3,000	0			
	Bay	G	0	0	0	0	0			
09/03/1999 Dan Connolly	Stream	F	0	0	0	18,000	0	APPROX. 2,000 CARCASSES.		
	Mouth	F	0	0	0	4,000	0			
	Bay	F	0	0	0	0	0			
Coleman Creek, 281-8015 08/06/1999 Witteveen	Stream	G	0	0	0	700	0			
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
08/09/1999 Dan Connolly	Stream	G	0	0	0	300	0	SURVEYED FROM FORKS DOWN ONLY.		
	Mouth	G	0	0	0	150	0			
	Bay	F	0	0	0	0	0			
08/18/1999 Dan Connolly	Stream	G	0	0	0	2,400	0			
	Mouth	G	0	0	0	4,000	0			
	Bay	G	0	0	0	0	0			
09/03/1999 Dan Connolly	Stream	F	0	0	0	7,000	0	LOW LIGHT.		
	Mouth	F	0	0	0	1,200	0			
	Bay	F	0	0	0	0	0			

-Continued-

Appendix F.1. (page 22 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
Ballast Is. Stream, 281-8016										
	08/06/1999		Stream	G	0	0	0	300	0	
		Witteveen	Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
09/03/1999										
		Dan Connolly	Stream	F	0	0	0	0	0	NOTHING SEEN.
			Mouth	F	0	0	0	0	0	
			Bay	F	0	0	0	0	0	
Swedania Pt. Stream, 281-9001										
	07/21/1999		Stream	G	0	0	0	0	0	SURVEYED AT HIGH ALITUDE.
		Witteveen	Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
08/06/1999										
		Dan Connolly	Stream	F	0	0	0	1,200	0	
			Mouth	F	0	0	0	0	0	
			Bay	F	0	0	0	0	0	
08/09/1999										
		Dan Connolly	Stream	G	0	0	0	1,600	0	3 GILLNETTERS, 3 BEACH SEINERS WORKING AREA.
			Mouth	F	0	0	0	0	0	
			Bay	F	0	0	0	0	0	
08/14/1999										
		Witteveen	Stream	G	0	0	0	10,000	0	
			Mouth	F	0	0	0	15,000	0	
			Bay	F	0	0	0	0	0	
08/18/1999										
		Dan Connolly	Stream	G	0	0	0	9,000	0	
			Mouth	G	0	0	0	1,000	0	
			Bay	G	0	0	0	0	0	
09/03/1999										
		Dan Connolly	Stream	G	0	0	0	33,000	0	APPROX 2,000 CARCASSES.
			Mouth							
			Bay							
09/14/1999										
		Dan Connolly	Stream	G	0	0	0	32,000	0	
			Mouth	G	0	0	0	0	0	
			Bay							
Rough Beach, 281-9002										
	07/13/1999		Stream							MOUTH CLOSED OFF BY BEACH
		Witteveen	Mouth	G	0	0	0	0	0	
			Bay							

-Continued-

Appendix F.1. (page 23 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
Witteveen	07/21/1999		Stream	E	0	0	0	0	0	SURVEYED AT HIGH ALTITUDE, FISH CRUISING ALONG BEACH. MOUTH NO LONGER CLOSED OFF.
			Mouth	E	0	0	0	50	0	
			Bay	E	0	0	0	600	0	
Dan Connolly	07/26/1999		Stream	E	0	0	0	0	0	JUMPERS AT MOUTH.
			Mouth	E	0	0	0	200	0	
			Bay	E	0	0	0	0	0	
Witteveen	07/31/1999		Stream	F	0	0	0	200	0	DARK LIGHT CONDITIONS
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
Dan Connolly	08/06/1999		Stream	F	0	0	0	3,100	0	
			Mouth	F	0	0	0	4,000	0	
			Bay	F	0	0	0	0	0	
Dan Connolly	08/09/1999		Stream	G	0	0	0	8,700	200	APPROX. 3,000 IN LOWER 1 MILE OF STREAM.
			Mouth	F	0	0	0	0	0	
			Bay	F	0	0	0	0	0	
Witteveen	08/14/1999		Stream	G	0	0	0	20,000	0	30 PLUS JUMPERS IN THE AIR AT A TIME.
			Mouth	F	0	0	0	0	0	
			Bay	F	0	0	0	40,000	0	
Dan Connolly	08/18/1999		Stream	G	0	0	0	25,600	0	
			Mouth	G	0	0	0	5,000	0	
			Bay	G	0	0	0	10,000	0	
Dan Connolly	09/03/1999		Stream	G	0	0	0	45,000	0	APPROX 2,000 CARCASSES.
			Mouth	G	0	0	0	8,000	0	
			Bay							
Dan Connolly	09/14/1999		Stream	G	0	0	0	68,000	0	MANY PINKS IN LOWER RIVER. NO COHO VIS. IN LOWER RIVER.
			Mouth	G	0	0	0	300	0	
			Bay							
W Side San Diego Bay, 281-9003										
Dan Connolly	08/06/1999		Stream	F	0	0	0	0	0	NOTHING
			Mouth	F	0	0	0	0	0	
			Bay	F	0	0	0	0	0	
Dan Connolly	08/09/1999		Stream	G	0	0	0	150	0	
			Mouth	G	0	0	0	0	0	
			Bay	F	0	0	0	0	0	

-Continued-

Appendix F.1. (page 24 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
	09/03/1999	Dan Connolly	Stream Mouth Bay	G	0	0	0	1,200	0	1,200 PINKS IN STREAM WITH 200 CARCASSES.
San Diego Lgn & Strm, 281-9004	08/06/1999	Dan Connolly	Stream Mouth Bay	F F F	0 0 0	0 0 0	0 0 0	40 0 0	0 0 0	
	08/09/1999	Dan Connolly	Stream Mouth Bay	F G F	0 0 0	0 0 0	0 0 0	5,400 0 0	0 0 0	GOOD VISIBILITY IN STREAM, POOR VIS. IN LAGOON. 5000 PINKS ON N.E. SHORE OF LAGOON.
	08/18/1999	Dan Connolly	Stream Mouth Bay	F G G	0 0 0	0 0 0	0 0 0	5,800 0 0	0 0 0	5500 IN THE LAGOON
	09/03/1999	Dan Connolly	Stream Mouth Bay	G	0	0	0	4,900	0	APPROX. 200 CARCASSES. 4,000 IN LAGOON WITH 400 CARCASSES.
Apollo Creek Minor, 282-1002	08/06/1999	Witteveen	Stream Mouth Bay	G G G	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	ZERO FISH
	08/12/1999	Witteveen	Stream Mouth Bay	P G G	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	ZERO VISIBILITY
	08/18/1999	Witteveen	Stream Mouth Bay	F F F	0 0 0	0 0 0	0 0 0	8,000 0 0	0 0 0	SHADOWY AND HARD TO SEE.
	09/03/1999	Witteveen	Stream Mouth Bay	G G G	0 0 0	0 0 0	0 0 0	16,000 0 0	0 0 0	
Apollo Creek Major, 282-1003	08/06/1999	Witteveen	Stream Mouth Bay	G G G	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	ZERO FISH

-Continued-

Appendix F.1. (page 25 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
	08/12/1999	Witteveen	Stream	P	0	0	0	0	0	HIGH MURKY WATER, ZERO VISIBILITY
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
	08/18/1999	Witteveen	Stream	P	0	0	0	1,600	0	MURKY WATER
			Mouth	F	0	0	0	0	0	
			Bay	F	0	0	0	0	0	
	08/25/1999	Witteveen	Stream	F	0	0	0	13,000	0	
			Mouth	F	0	0	0	0	0	
			Bay	F	0	0	0	0	0	
	09/03/1999	Witteveen	Stream	E	0	0	0	17,000	0	
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
Acheredin Lake, 282-1004	08/06/1999	Witteveen	Stream	G	0	420	0	200	0	MOST SOCKEYE AND PINKS IN LAKE, 20 OF THE SOCKEYE WERE IN B TRIB.
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
	08/12/1999	Witteveen	Stream	E	0	1,400	0	600	0	SOCKEYE SPREAD THROUGHOUT LAKE, DID NOT SURVEY TRIBS.
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
	08/18/1999	Witteveen	Stream	G	0	1,400	0	700	0	SOCKEYE SPAWNING IN EAST SHOAL
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
	09/03/1999	Witteveen	Stream	G	0	2,500	0	2,500	0	SOCKEYE IN SHOALS AND TRIBS., PINKS IN OUTLET OF LAKE.
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
Unnamed 1008, 282-1008	09/03/1999	Witteveen	Stream	G	0	0	0	0	0	MOUTH BLOCKED.
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
Unnamed 1010, 282-1010	08/06/1999	Witteveen	Stream	G	0	0	0	0	0	ZERO FISH
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	

-Continued-

Appendix F.1. (page 26 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
08/12/1999 Witteveen	Stream	E	0	0	0	0	0	0	NO FISH	
	Mouth	G	0	0	0	0	0	0		
	Bay	G	0	0	0	0	0	0		
09/03/1999 Witteveen	Stream	G	0	0	0	4,000	0	0		
	Mouth	G	0	0	0	0	0	0		
	Bay	G	0	0	0	0	0	0		
Apollo Gold Mine, 282-1011 08/06/1999 Witteveen	Stream	G	0	0	0	1,200	0	0		
	Mouth	G	0	0	0	0	0	0		
	Bay	G	0	0	0	0	0	0		
08/12/1999 Witteveen	Stream	P	0	0	0	1,000	0	0	HIGH SPEED SURVEY, LOTS OF SHADOWS.	
	Mouth	G	0	0	0	0	0	0		
	Bay	G	0	0	0	0	0	0		
08/18/1999 Dan Connolly	Stream	G	0	0	0	16,600	0	0	6000 IN LOWER CHANNEL.	
	Mouth	G	0	0	0	200	0	0		
	Bay	G	0	0	0	0	0	0		
09/03/1999 Witteveen	Stream	G	0	0	0	18,000	0	0	PLUS 3,000 CARCASSES.	
	Mouth	G	0	0	0	500	0	0		
	Bay	G	0	0	0	0	0	0		
Unga Cape Stream, 282-1012 08/12/1999 Witteveen	Stream	F	0	0	0	0	0	0	NO FISH	
	Mouth	F	0	0	0	0	0	0		
	Bay	G	0	0	0	0	0	0		
09/03/1999 Witteveen	Stream	G	0	0	0	3,000	0	0		
	Mouth	G	0	0	0	0	0	0		
	Bay	G	0	0	0	0	0	0		
Johnny Nelson Lake, 282-1013 08/06/1999 Witteveen	Stream	G	0	0	0	0	0	0	ZERO FISH	
	Mouth	G	0	0	0	0	0	0		
	Bay	G	0	0	0	0	0	0		
08/18/1999 Dan Connolly	Stream	F	0	0	0	200	0	0	TRIBS BRUSHY, DIDN'T SURVEY LAKE.	
	Mouth									
	Bay	G	0	0	0	0	0	0		

-Continued-

Appendix F.1. (page 27 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
09/03/1999 Witteveen	Stream	G	0	0	0	0	0	0	NONE	
	Mouth	G	0	0	0	0	0	0		
	Bay	G	0	0	0	0	0	0		
Squaw Hbr. Minor, 282-1014 08/06/1999 Witteveen	Stream	G	0	0	0	0	0	0		
	Mouth	G	0	0	0	3,000	0	0		
	Bay	G	0	0	0	0	0	0		
08/12/1999 Witteveen	Stream	F	0	0	0	300	0	0		
	Mouth	G	0	0	0	0	0	0		
	Bay	G	0	0	0	0	0	0		
08/18/1999 Dan Connolly	Stream	F	0	0	0	80	0	0		
	Mouth	G	0	0	0	0	0	0		
	Bay	G	0	0	0	0	0	0		
08/25/1999 Witteveen	Stream	G	0	0	0	1,500	0	0	LOTS OF FISH ALL OVER BAY.	
	Mouth	G	0	0	0	2,000	0	0		
	Bay	G	0	0	0	20,000	0	0		
09/03/1999 Witteveen	Stream	G	0	0	0	13,000	0	0		
	Mouth	G	0	0	0	0	0	0		
	Bay	G	0	0	0	0	0	0		
Squaw Hbr. Major, 282-1015 08/06/1999 Witteveen	Stream	G	0	0	0	2,500	0	0		
	Mouth	G	0	0	0	0	0	0		
	Bay	G	0	0	0	4,000	0	0		
08/12/1999 Witteveen	Stream	F	0	0	0	4,000	0	0	FISH SCHOOLED WITHIN 200 YDS OF MOUTH. BEACH SEINERS WORKING AT 500 YARDS.	
	Mouth	G	0	0	0	10,000	0	0		
	Bay	G	0	0	0	0	0	0		
08/13/1999 Dan Connolly	Stream	E	0	0	0	7,500	0	0	MOST FISH SCHOOLED IN TWO BENDS OF STREAM.	
	Mouth	E	0	0	0	0	0	0		
	Bay	G	0	0	0	7,000	0	0		
08/18/1999 Dan Connolly	Stream	G	0	0	0	7,300	0	0		
	Mouth	G	0	0	0	0	0	0		
	Bay	G	0	0	0	7,000	0	0		
08/25/1999 Witteveen	Stream	G	0	0	0	43,000	0	0	MOST OF FISH WERE IN LOWER RIVER, ALMOST NONE IN UPPER RIVER.	
	Mouth	G	0	0	0	1,000	0	0		
	Bay	G	0	0	0	3,000	0	0		

-Continued-

Appendix F.1. (page 28 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
	09/03/1999	Witteveen	Stream	G	0	0	0	95,000	0	PLUS 1,000 CARCASSES.
			Mouth	G	0	0	0	3,000	0	
			Bay	G	0	0	0	0	0	
Ben Green Bight-farm, 282-1016	07/13/1999	Witteveen	Stream	G	0	0	0	0	0	
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
	07/20/1999	Witteveen	Stream	G	0	0	0	0	0	SURVEYED 1/2 MILE OF RIVER
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
	07/26/1999	Dan Connolly	Stream	G	0	0	0	2,200	0	SALMON AT FORK, LOWER SECTION OF STREAM.
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
	07/31/1999	Witteveen	Stream	G	0	0	0	1,000	0	FISH SPREAD THROUGHOUT RIVER
			Mouth	G	0	0	0	4,000	0	
			Bay	G	0	0	0	0	0	
	08/06/1999	Witteveen	Stream	G	0	0	0	5,000	0	
			Mouth	G	0	0	0	2,500	0	
			Bay	G	0	0	0	0	0	
	08/12/1999	Witteveen	Stream	G	0	0	0	7,000	0	LOTS OF FISH IN BAY NEAR MOUTH
			Mouth	G	0	0	0	10,000	0	
			Bay	G	0	0	0	0	0	
	08/18/1999	Dan Connolly	Stream	G	0	0	0	7,600	1,500	
			Mouth	G	0	0	0	9,000	0	
			Bay	G	0	0	0	0	0	
	09/12/1999	Witteveen	Stream	G	0	0	0	30,000	0	PLUS 15-20,000 CARCASSES, APPROX 20% OF THE CARCASSES WERE CHUM.
			Mouth	G	0	0	0	15,000	0	
			Bay	G	0	0	0	0	0	
Humboldt Creek-popof, 282-1018	08/10/1999	Briana Lawson	Stream	E	0	0	0	0	0	NO FISH. FISH LADDER INSTALLED 8/98 STILL IN PLACE. PORTIONS OF SURVEY DIFFICULT DUE TO OVERGROWN BRUSH.
			Mouth							
			Bay							

-Continued-

Appendix F.1. (page 29 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
	08/16/1999	Briana Lawson	Stream Mouth Bay	G	0	0	0	350	0	
	09/03/1999	Briana Lawson	Stream Mouth Bay	E	0	0	15	2,400	0	40 CARCASSES.
Red Cove-popof, 282-1020	08/18/1999	Witteveen	Stream Mouth Bay	F F F	0 0 0	0 0 0	0 0 0	3 0 0	0 0 0	YES, 3 FISH. DARK AND SHADOWY
	09/03/1999	Dan Connolly	Stream Mouth Bay	F F F	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	NOTHING SEEN.
	09/12/1999	Witteveen	Stream Mouth Bay	E G G	0 0 0	650 0 0	200 0 0	800 150 150	0 0 0	300 PINK IN LAKE, SOCKEYE IN LAKE, COHO IN LAKE, 500 PINK IN UPPER STREAM.
Salmon Ranch-popof, 282-1101	08/12/1999	Witteveen	Stream Mouth Bay	G G G	0 0 0	0 0 0	0 0 0	2,000 0 0	0 0 0	BRUSHY
	09/03/1999	Dan Connolly	Stream Mouth Bay	F F F	0 0 0	0 0 0	0 0 0	700 0 0	0 0 0	APPROX 400 CARCASSES. VERY BRUSHY.
Fox Hole-popof, 282-1103	09/03/1999	Dan Connolly	Stream Mouth Bay	F F F	0 0 0	0 0 0	0 0 0	2,300 2,000 0	0 0 0	APPROX. 1,000 CARCASSES.
W Side Korovin Bay, 282-1105	09/03/1999	Witteveen	Stream Mouth Bay	G G G	0 0 0	0 0 0	0 0 0	4,500 0 0	0 0 0	PLUS 300 CARCASSES.
	09/12/1999	Witteveen	Stream Mouth Bay	G G F	0 0 0	0 0 0	0 0 0	12,000 0 0	0 0 0	PLUS 4,000 CARCASSES.

-Continued-

Appendix F.1. (page 30 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
Korovin Lake, 282-1106										
	09/03/1999		Stream	G	0	100	0	50	0	SOCKEYE IN LAKE, PINKS IN TRIBS.
		Witteveen	Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
	09/12/1999		Stream	G	0	700	0	0	0	SURVEYED LAKE AND OUTLET ONLY, 40 FRESH DEAD COHO IN MOUTH OF LAKE, POSSIBLY BLOCKED BY LOG JAM.
		Witteveen	Mouth	G	0	0	0	400	0	
			Bay	F	0	0	0	0	0	
Coal Harbor West, 282-1201										
	07/13/1999		Stream							SURVEYED MOUTH ONLY.
		Witteveen	Mouth	F	0	0	0	0	0	
			Bay	F	0	0	0	0	0	
	07/20/1999		Stream	G						MOUTH ONLY
		Witteveen	Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
	07/26/1999		Stream	G	0	0	0	0	0	SCHOOL AT MOUTH.
		Dan Connolly	Mouth	G	0	0	0	200	0	
			Bay	G	0	0	0	0	0	
	07/31/1999		Stream	G	0	0	0	0	0	SURVEYED ONLY HALF THE RIVER
		Witteveen	Mouth	G	0	0	0	200	0	
			Bay	G	0	0	0	0	0	
	08/18/1999		Stream	G	0	0	0	350	0	
		Dan Connolly	Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
	09/04/1999		Stream	G	0	0	0	0	0	
		Witteveen	Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
Zachary Bay 1202, 282-1202										
	07/13/1999		Stream	G						
		Witteveen	Mouth	G	0	0	0	50	0	
			Bay	G	0	0	0	0	0	
	07/20/1999		Stream	G						MOUTH ONLY
		Witteveen	Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	

-Continued-

Appendix F.1. (page 31 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
07/31/1999 Witteveen	Stream	G	0	0	0	500	0	LOTS OF FISH SEEN JUMPING IN MIDDLE OF BAY		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
08/18/1999 Dan Connolly	Stream	F	0	0	0	3,100	200	VERY BRUSHY		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
09/04/1999 Witteveen	Stream	G	0	0	0	3,000	0	PLUS 1,500 CARCASSES.		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
Zachary Bay 1203, 282-1203										
07/13/1999 Witteveen	Stream	G								
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
07/20/1999 Witteveen	Stream	G						MOUTH ONLY		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
07/31/1999 Witteveen	Stream	G	0	0	0	1,000	0			
	Mouth	G	0	0	0	1,000	0			
	Bay	G	0	0	0	3,000	0			
08/18/1999 Dan Connolly	Stream	F	0	0	0	460	0			
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
09/04/1999 Witteveen	Stream	G	0	0	0	1,500	0	PLUS 1,000 CARCASSES.		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
Zachary Bay 1204, 282-1204										
07/13/1999 Witteveen	Stream	G								
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
07/20/1999 Witteveen	Stream	G						75 PINKS IN OUTER MOUTH		
	Mouth	G	0	0	0	75	0			
	Bay	G	0	0	0	0	0			
07/26/1999 Dan Connolly	Stream	F	0	0	0	800	0	BRUSH COVERED, DIFFICULT TO SEE.		
	Mouth	G	0	0	0	200	0			
	Bay	G	0	0	0	0	0			

172

Appendix F.1. (page 32 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
07/31/1999 Witteveen			Stream	G	0	0	0	2,500	0	
			Mouth	G	0	0	0	1,500	0	
			Bay	G	0	0	0	0	0	
08/18/1999 Dan Connolly			Stream	F	0	0	0	1,800	0	ZACHARY BAY STREAMS VERY BRUSHY WITH SHADOWS, CARCASSES AT MOUTH
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
09/04/1999 Witteveen			Stream	G	0	0	0	4,000	0	PLUS 9,000 CARCASSES.
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
Zachary Bay 1205, 282-1205 07/13/1999 Witteveen			Stream	G						
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
07/20/1999 Witteveen			Stream	G						MOUTH ONLY
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
07/26/1999 Dan Connolly			Stream	F	0	0	0	2,000	0	
			Mouth	G	0	0	0	3,000	0	
			Bay	G	0	0	0	0	0	
07/31/1999 Witteveen			Stream	G	0	0	0	3,500	0	PLUS 1,000 CARCASSES
			Mouth	G	0	0	0	3,000	0	
			Bay	G	0	0	0	0	0	
08/06/1999 Witteveen			Stream							SURVEYED ENTIRE ZACHARY BAY ONLY
			Mouth							
			Bay	G	0	0	0	22,000	0	
08/18/1999 Dan Connolly			Stream	G	0	0	0	8,600	0	CARCASSES AT MOUTH
			Mouth	G	0	0	0	5,000	0	
			Bay	G	0	0	0	13,000	0	
09/04/1999 Witteveen			Stream	G	0	0	0	5,000	0	PLUS 19,000 CARCASSES.
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
Zachary Bay 1206, 282-1206 07/13/1999 Witteveen			Stream	G						
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	

-Continued-

Appendix F.1. (page 33 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
07/20/1999 Witteveen	Stream	G								MOUTH ONLY
	Mouth	G	0	0	0	0	0	0		
	Bay	G	0	0	0	0	0	0		
07/26/1999 Dan Connolly	Stream	G	0	0	0	700	0			
	Mouth	G	0	0	0	0	0	0		
	Bay	G	0	0	0	0	0	0		
07/31/1999 Witteveen	Stream	G	0	0	0	500	0			
	Mouth	G	0	0	0	400	0			
	Bay	G	0	0	0	0	0	0		
08/18/1999 Dan Connolly	Stream	G	0	0	0	300	0			
	Mouth	G	0	0	0	300	0			
	Bay	G	0	0	0	0	0	0		
09/04/1999 Witteveen	Stream	G	0	0	0	1,000	0			
	Mouth	G	0	0	0	0	0	0		
	Bay	G	0	0	0	0	0	0		
Zachary Bay 1207, 282-1207										
07/13/1999 Witteveen	Stream	G								
	Mouth	G	0	0	0	0	0	0		
	Bay	G	0	0	0	0	0	0		
07/20/1999 Witteveen	Stream	G								MOUTH ONLY
	Mouth	G	0	0	0	0	0	0		
	Bay	G	0	0	0	0	0	0		
07/31/1999 Witteveen	Stream	G	0	0	0	0	0	0		NO FISH
	Mouth	G	0	0	0	0	0	0		
	Bay	G	0	0	0	0	0	0		
08/18/1999 Dan Connolly	Stream	F	0	0	0	1,900	0			CARCASSES
	Mouth	G	0	0	0	0	0	0		
	Bay	G	0	0	0	6,600	0			
09/04/1999 Witteveen	Stream	G	0	0	0	1,000	0			PLUS 2,000 CARCASSES.
	Mouth	G	0	0	0	0	0	0		
	Bay	G	0	0	0	0	0	0		
2nd Strm S. Of Qtz Pt, 282-1208										
07/13/1999 Witteveen	Stream	G								
	Mouth	G	0	0	0	0	0	0		
	Bay	G	0	0	0	0	0	0		

174

Appendix F.1. (page 34 of 65)

175

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
07/20/1999 Witteveen			Stream	G						MOUTH ONLY, 1 JUMPER IN MOUTH AREA
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
07/31/1999 Witteveen			Stream	G	0	0	0	50	0	
			Mouth	G	0	0	0	300	0	
			Bay	G	0	0	0	200	0	
08/18/1999 Dan Connolly			Stream	F	0	0	0	700	0	
			Mouth	G	0	0	0	2,000	0	
			Bay	G	0	0	0	0	0	
09/04/1999 Witteveen			Stream	G	0	0	0	1,000	0	PLUS 2,000 CARCASSES.
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
1st Strm S. Of Qtz Pt, 282-1209 07/20/1999 Witteveen			Stream	G						MOUTH ONLY
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
07/31/1999 Witteveen			Stream	G	0	0	0	50	0	
			Mouth	G	0	0	0	500	0	
			Bay	G	0	0	0	0	0	
08/18/1999 Dan Connolly			Stream	F	0	0	0	150	0	
			Mouth	G	0	0	0	400	0	
			Bay	G	0	0	0	0	0	
09/04/1999 Witteveen			Stream	G	0	0	0	1,500	0	PLUS 4,000 CARCASSES.
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
Zachary Bay 1210, 282-1210 07/20/1999 Witteveen			Stream	G						MOUTH ONLY
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	
07/31/1999 Witteveen			Stream	G	0	0	0	0	0	
			Mouth	G	0	0	0	1,500	0	
			Bay	G	0	0	0	0	0	
08/18/1999 Dan Connolly			Stream	F	0	0	0	200	0	
			Mouth	G	0	0	0	0	0	
			Bay	G	0	0	0	0	0	

-Continued-

Appendix F.1. (page 35 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
	09/04/1999	Witteveen	Stream	G	0	0	0	300	0	
			Mouth	G	0	0	0	0		
			Bay	G	0	0	0	0		
Unga Spit, 282-1301	08/12/1999	Witteveen	Stream	G	0	0	0	0	0	BRUSHY
			Mouth	G	0	0	0	0		
			Bay	G	0	0	0	0		
	09/04/1999	Witteveen	Stream	G	0	0	0	50	0	
			Mouth	G	0	0	0	0		
			Bay	G	0	0	0	0		
Dry Lagoon, 282-1302	07/13/1999	Witteveen	Stream	G	0	0	0	0	0	
			Mouth	G	0	0	0	0		
			Bay	G	0	0	0	0		
	07/26/1999	Dan Connolly	Stream	G	0	0	0	200	0	
			Mouth	G	0	0	0	0		
			Bay	G	0	0	0	0		
	07/31/1999	Witteveen	Stream	F	0	0	0	12,000	0	DARK SURVEY CONDITIONS, MOST OF FISH WERE IN LOWER RIVER
			Mouth	G	0	0	0	0		
			Bay	G	0	0	0	0		
	08/06/1999	Witteveen	Stream	G	0	0	0	20,000	0	FISH IN LOWER 3/4 OF RIVER NOW.
			Mouth	G	0	0	0	0		
			Bay	G	0	0	0	0		
	08/12/1999	Witteveen	Stream	P	0	0	0	4,000	0	HIGH MURKY WATER, VERY DARK, POOR CONDITIONS
			Mouth	G	0	0	0	0		
			Bay	G	0	0	0	0		
	08/13/1999	Dan Connolly	Stream	G	0	0	0	38,600	0	MOST FISH IN LOWER 1 MILE OF STREAM.
			Mouth	G	0	0	0	500		
			Bay	G	0	0	0	0		
	08/18/1999	Witteveen	Stream	F	0	0	0	22,000	0	SHADOWY
			Mouth	G	0	0	0	0		
			Bay	G	0	0	0	0		
	09/02/1999	Witteveen	Stream	P	0	0	0	55,000	0	LOWER RIVER VERY MURKY, LIKELY MANY MORE.
			Mouth	G	0	0	0	0		
			Bay	G	0	0	0	0		

-Continued-

Appendix F.1. (page 36 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
09/03/1999 Witteveen	Stream	G	0	0	0	48,000	0	PLUS 1,500 CARCASSES.		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
Bay Point, 282-1303 07/26/1999 Dan Connolly	Stream	E	0	0	0	2,000	0	2 SCHOOLS APPROX. 1 MILE UP STREAM.		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
07/31/1999 Witteveen	Stream	F	0	0	0	12,000	0	DARK SURVEY CONDITIONS		
	Mouth	G	0	0	0	7,000	0			
	Bay	G	0	0	0	0	0			
08/06/1999 Witteveen	Stream	G	0	0	0	25,000	0			
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
08/12/1999 Witteveen	Stream	F	0	0	0	27,000	0	LOW LIGHT		
	Mouth	G	0	0	0	1,500	0			
	Bay	G	0	0	0	0	0			
08/18/1999 Witteveen	Stream	F	0	0	0	50,000	0	10-15,000 IN THE LAGOON (INCLUDED IN COUNT)		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
09/03/1999 Witteveen	Stream	G	0	0	0	50,000	0	4,000 CARCASSES.		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
Pinnacle Point Strm., 282-1304 07/31/1999 Witteveen	Stream	F	0	0	0	1,500	0	DARK SURVEY CONDITIONS		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
08/06/1999 Witteveen	Stream	G	0	0	0	2,800	0	DARK BOTTOM		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
08/12/1999 Witteveen	Stream	F	0	0	0	4,000	0	MOST FISH IN LOWER RIVER		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
08/18/1999 Witteveen	Stream	F	0	0	0	17,000	0	DARK CONDITIONS, DIFFICULT TO SEE.		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	3,000	0			

-Continued-

Appendix F.1. (page 37 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
09/02/1999 Witteveen	Stream	G	0	0	0	20,000	0			
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
2nd Str S Of Pinn Pt, 282-1305 08/12/1999 Witteveen	Stream	F	0	0	0	50	0			
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
09/03/1999 Witteveen	Stream	G	0	0	0	20	0	BRUSHY.		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
3rd Str S Of Pinn Pt, 282-1306 08/12/1999 Witteveen	Stream	F	0	0	0	0	0	ZERO		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
09/03/1999 Witteveen	Stream	G	0	0	0	20	0	BRUSHY.		
	Mouth	G	0	0	0	0	0			
	Bay	G	0	0	0	0	0			
Porpoise Rocks, 282-2001 09/14/1999 Dan Connolly	Stream	G	0	0	0	0	0	BLOCKED AT MOUTH. NOTHING		
	Mouth	G	0	0	0	0	0			
	Bay									
Porpoise Harbor, 282-2002 09/14/1999 Dan Connolly	Stream	G	0	0	0	400	400	SOME JUMPERS AT MOUTH. COHO = 50		
	Mouth	G	0	0	50	0	0			
	Bay									
Lagoon I.k, Sanborn H, 282-2003 09/14/1999 Dan Connolly	Stream	G	0	0	0	4,000	800	100 CARCASSES.		
	Mouth	G	0	0	0	0	0			
	Bay	G								
Head Of Sanborn Hbr, 282-2004 09/14/1999 Dan Connolly	Stream	F	0	0	0	30,000	0	HIGH WINDS, HIGH SURVEY. 7,000 CARCASSES.		
	Mouth	F	0	0	0	500	0			
	Bay									

-Continued-

Appendix F.1. (page 38 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
Larsen Bay, 282-2006	09/14/1999	Dan Connolly	Stream	F	0	30	0	1,200	0	HIGH WINDS, HIGH SURVEY. 30 SOCKEYE IN LAKES.
			Mouth Bay	F	0	0	0	0	0	
East Bight, 282-2008	09/14/1999	Dan Connolly	Stream	G	0	0	0	0	0	BLOCKED AT OUTLET. NOTHING
			Mouth Bay	G	0	0	0	0	0	
West Bay, Ne Bight, 282-2009	09/14/1999	Dan Connolly	Stream	G	0	0	0	4,000	0	2,000 IN LAKE. 400 CARCASSES.
			Mouth Bay	G	0	0	0	1,000	0	
Sw. Strm, Long J.lgn, 283-6102	08/20/1999	Armie Shaul	Stream	F	0	0	0	700	700	ADDITIONAL 5,000 CHUMS IN LAGOON.
			Mouth Bay	F	0	0	0	0	1,000	
	09/07/1999	Armie Shaul	Stream	E	0	0	0	10,000	1,200	ADDITIONAL 5,000 CHUMS IN LAGOON.
			Mouth Bay	G	0	0	0	0	2,000	
Long John Lgn, 2 S., 283-6103	09/07/1999	Armie Shaul	Stream	G	0	0	0	100	100	
			Mouth Bay							
Long John Lagoon Springs, 283-6104	08/06/1999	Armie Shaul	Stream	E	0	1,200	0	0	0	
			Mouth Bay							
	08/20/1999	Armie Shaul	Stream	F	0	1,500	0	0	0	POOR LIGHT, A FEW COULD HAVE BEEN PINKS.
			Mouth Bay	F						
	09/07/1999	Armie Shaul	Stream	E	0	0	0	4,000	300	
			Mouth Bay							

-Continued-

Appendix F.1. (page 39 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
Long John Lagoon East, 283-6105										
	09/11/1999		Stream	E	0	0	500	0	0	
		Arnie Shaul	Mouth	G	0	0	500	0	0	
			Bay							
Cape Tolstoi, 283-6201										
	08/28/1999		Stream	G	0	0	0	5,200	0	
		Dan Connolly	Mouth	G	0	0	0	2,500	0	
			Bay							
Coal Bay 6202, 283-6202										
	08/28/1999		Stream	G	0	0	0	21,000	0	
		Dan Connolly	Mouth	G	0	0	0	400	0	
			Bay							
Coal Bay 6203, 283-6203										
	08/28/1999		Stream	G	0	0	0	5,700	0	
		Dan Connolly	Mouth	G	0	0	0	1,000	0	
			Bay							
Coal Bay Unnamed, 283-6204										
	07/24/1999		Stream	G	0	0	0	0	0	
		Arnie Shaul	Mouth							
			Bay							
	08/06/1999		Stream	F	0	0	0	0	0	POOR LIGHT
		Arnie Shaul	Mouth							
			Bay							
	08/14/1999		Stream	G	0	0	0	19,000	0	NUMBER OF JUMPERS IN BAY INDICATE MANY MORE THAN 4,000 FISH IN BAY.
		Witteveen	Mouth	F	0	0	0	0	0	
			Bay	F	0	0	0	4,000	0	
	08/28/1999		Stream	G	0	0	0	48,000	0	19,000 IN W. FORK.
		Dan Connolly	Mouth	G	0	0	0	1,200	0	
			Bay							
Coal Bay Main Stream, 283-6205										
	07/21/1999		Stream	E	0	0	0	0	0	SURVEYED MAIN STEM.
		Witteveen	Mouth	E	0	0	0	0	0	
			Bay	E	0	0	0	0	0	
	07/24/1999		Stream	G	0	0	0	200	0	
		Arnie Shaul	Mouth							
			Bay							

181

-Continued-

Appendix F.1. (page 40 of 65)

182

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
	07/26/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	1,000	0	
	07/31/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	2,400	0	
	08/06/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	9,000	0	
	08/14/1999	Witteveen	Stream Mouth Bay	G F F	0 0 0	0 0 0	0 0 0	41,000 3,500 0	0 0 0	FISH PRETTY EVENLY DISTRIBUTED.
	08/28/1999	Dan Connolly	Stream Mouth Bay	G G	0 0	0 0	0 0	55,000 13,000	0 0	TURBULENT. HAD TO TURN AROUND IN UPPER CANYON. ENTIRE STEAM NOT SURVEYED.
Strm S Of Chinaman L., 283-6304	09/05/1999	Arnie Shaul	Stream Mouth Bay	G F	0 0	0 0	0 0	0 0	3,000 0	
Lower Chinaman Lgn, 283-6305	09/05/1999	Arnie Shaul	Stream Mouth Bay	G F	0 0	0 0	0 0	0 0	2,200 0	INCLUDES 283-6306.
Chinaman Lgn Main, 283-6310	09/05/1999	Arnie Shaul	Stream Mouth Bay	G G	0 0	0 0	0 0	0 0	2,800 14,000	
Chinaman Lgn North, 283-6311	09/05/1999	Arnie Shaul	Stream Mouth Bay	G F	0 0	0 0	0 0	0 0	0 10,000	SOME OF THE CHUMS NEAR THE MOUTH MUST BE GOING TO DROP BACK TO 63.10
Ruby's Lagoon, 283-6313	09/05/1999	Arnie Shaul	Stream Mouth Bay	G G	0 0	100 0	0 0	0 0	5,400 10,000	

-Continued-

Appendix F.1. (page 41 of 65)

183

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
Middle Creek, 283-6315										
	07/21/1999	Armie Shaul	Stream Mouth Bay	G	0	0	0	3,000	0	ALL IN FIRST 500 YARDS. MUCH BETTER CONDITIONS THAN MORNING SURVEY BY WETTEVEEN.
	07/21/1999	Witteveen	Stream Mouth Bay	F	0	0	0	50	0	ONLY FISH WERE IN LOWER RIVER.
				F	0	0	0	0	0	
	07/24/1999	Armie Shaul	Stream Mouth Bay	G	0	0	0	4,000	0	
	07/26/1999	Armie Shaul	Stream Mouth Bay	F	0	0	0	4,000	0	
	07/31/1999	Armie Shaul	Stream Mouth Bay	G	0	0	0	19,000	0	
				F	0	0	0	7,500	0	
	08/06/1999	Armie Shaul	Stream Mouth Bay	G	0	0	0	31,000	0	
				F	0	0	0	12,500	0	
	08/13/1999	Armie Shaul	Stream Mouth Bay	G	0	0	0	82,000	0	17,000 IN RIGHT FORK.
	09/04/1999	Witteveen	Stream Mouth Bay	P	0	0	0	81,000	0	DARK AND TURBULENT. SURVEYED ONLY TO VALLEY ON RIGHT FORK. PLUS 16,000 CARCASSES.
				F	0	0	0	0	0	
				F	0	0	0	0	0	
	09/11/1999	Armie Shaul	Stream Mouth Bay	G	0	0	0	96,000	0	
Settlement Point, 283-6316										
	07/21/1999	Witteveen	Stream Mouth Bay	P	0	0	0	200	0	FISH IN UPPER RIVER, VERY LOW LIGHT CONDITIONS.
				P	0	0	0	0	0	
				F	0	0	0	0	0	
	07/21/1999	Armie Shaul	Stream Mouth Bay	E	0	0	0	5,800	0	MUCH BETTER CONDITIONS THAN MORNING SURVEY BY WITTEVEEN. FISH STARTING TO SHOW ALONG SUNSET STRIP.
				G	0	0	0	500	0	

-Continued-

Appendix F.1. (page 42 of 65)

184

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
	07/24/1999	Armie Shaul	Stream Mouth Bay	G	0	0	0	7,000	0	5,000 WERE BELOW FORKS.
	07/26/1999	Armie Shaul	Stream Mouth Bay	G G	0 0	0 0	0 0	20,000 1,000	0 0	
	07/31/1999	Armie Shaul	Stream Mouth Bay	G	0	0	0	60,000	0	DIDN'T SURVEY SOUTH FORK.
	08/06/1999	Armie Shaul	Stream Mouth Bay	G F	0 0	0 0	0 0	75,000 17,500	0	DID NOT SURVEY SOUTH FORK.
	08/13/1999	Armie Shaul	Stream Mouth Bay	E	0	0	0	144,000	0	73,000 BELOW FORKS, 9,000 IN SOUTH FORK. LOOKS GOOD.
	09/04/1999	Witteveen	Stream Mouth Bay	P F F	0 0 0	0 0 0	0 0 0	113,000 0 0	0 0 0	DARK AND TURBULENT. SURVEYED ONLY 1 MILE OF S. FORK. PLUS 5,000 CARCASSES.
	09/11/1999	Armie Shaul	Stream Mouth Bay	G	0	0	0	138,000	500	25,000 IN SOUTH FORK, 58,000 BELOW FORKS. CHUMS IN LOWER 500 YARDS.
Bluff Point Creek, 283-6405	08/06/1999	Armie Shaul	Stream Mouth Bay	P G	0 0	0 0	0 0	0 0	0 0	40-50,000 PINKS & CHUMS AT MOUTH.
	08/13/1999	Armie Shaul	Stream Mouth Bay	G G	0 0	0 0	0 0	8,000 100,000	2,000 1,000	
	09/04/1999	Witteveen	Stream Mouth Bay	F F F	0 0 0	0 0 0	0 0 0	32,000 0 0	0 0 0	PLUS 25,000 CARCASSES MOSTLY IN UPPER RIVER.
	09/11/1999	Armie Shaul	Stream Mouth Bay	G	0	0	0	19,000	500	THREE TIMES AS MANY CARCASSES.

-Continued-

Appendix F.1. (page 43 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
Canoe Bay River, 283-6406										
	07/13/1999		Stream	G	0	0	0	0	0	SAW ONE JUMPER AND 3 BEARS IN FLATS.
		Witteveen	Mouth	F	0	0	0	0	0	
			Bay	F	0	0	0	0	0	
	07/21/1999		Stream	E	0	0	0	0	12,000	SAW 4 JUMPERS IN FLATS IN ADDITION TO THE 500 FISH. THE 12,000 CHUM WERE IN THE FIRST MILE OF THE STREAM.
		Witteveen	Mouth	E	0	0	0	0	0	
			Bay	E	0	0	0	0	500	
	07/24/1999		Stream	G	0	200	0	0	12,000	ADDITIONAL 7,000 CHUMS IN INNER BAY.
		Arnie Shaul	Mouth	G	0	0	0	0	19,000	
			Bay							
	07/26/1999		Stream	G	0	600	0	0	21,000	MOUTH AND INNER BAY CHOPPY WITH POOR LIGHT.
		Arnie Shaul	Mouth	P	0	0	0	0	0	
			Bay							
	07/31/1999		Stream	G	0	1,200	0	0	33,000	
		Arnie Shaul	Mouth							
			Bay							
	08/13/1999		Stream	G	0	11,000	0	13,000	41,000	
		Arnie Shaul	Mouth	G	0	0	0	150,000	110,000	
			Bay							
	09/04/1999		Stream	P	0	0	0	109,000	74,000	TURBULENT, MURKY, FAST, DARK. SPECIE ID VERY DIFFICULT, PLUS 35,000 CARCASSES.
		Witteveen	Mouth	F	0	0	0	0	0	
			Bay	F	0	0	0	0	0	
	09/11/1999		Stream	G	0	0	5,000	66,000	27,000	29,000 PINKS WERE IN FOUR BEAR CREEK, THREE TIMES AS MANY CARCASSES.
		Arnie Shaul	Mouth							
			Bay							
Wolverine Gulch, 283-6407										
	09/04/1999		Stream	F	0	0	0	13,000	0	PLUS 3,000 CARCASSES.
		Witteveen	Mouth	F	0	0	0	0	0	
			Bay	F	0	0	0	0	0	
Entrance Creek, 283-6408										
	07/21/1999		Stream	E	0	0	0	200	0	FISH WERE IN LOWER RIVER.
		Witteveen	Mouth	E	0	0	0	0	0	
			Bay	E	0	0	0	0	0	

-Continued-

Appendix F.1. (page 44 of 65)

186

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
	07/24/1999	Arnie Shaul	Stream Mouth Bay	E	0	0	0	0	0	
	07/31/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	2,500	0	
	08/13/1999	Arnie Shaul	Stream Mouth Bay	G G	0 0	0 0	0 0	10,000 0	0 20,000	MOST CHUMS AT MOUTH, PROBABLY DESTINED FOR CANOE BAY RIVER.
	09/04/1999	Witteveen	Stream Mouth Bay	F F F	0 0 0	0 0 0	0 0 0	48,000 0 0	0 0 0	PLUS 30,000 CARCASSES.
Inner Canoe,s Side, 283-6409	09/04/1999	Witteveen	Stream Mouth Bay	P F F	0 0 0	0 0 0	0 0 0	0 0 0	4,000 0 0	DARK NEARLY UNSURVEYABLE. PLUS 1,000 CARCASSES.
	09/11/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	0	3,000	
Ness Creek, 283-6410	09/04/1999	Witteveen	Stream Mouth Bay	F F F	0 0 0	0 0 0	0 0 0	15,000 0 0	0 0 0	PLUS 4,000 CARCASSES AND 2,000 CARCASSES IN THE MOUTH.
	09/11/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	23,000	0	
Mino Creek, 283-7001	07/16/1999	Witteveen	Stream Mouth Bay	G G F	0 0 0	0 0 0	0 0 0	1,900 0 0	0 0 0	ALL FISH WERE SEEN WITHIN ONE MILE OF THE COAST IN THE A FORK SURVEYED A FORK UNTIL IT SPLITS INTO F FORK. PARTIAL SURVEY OF D FORK. POOR LIGHT CONDITIONS.
	07/21/1999	Witteveen	Stream Mouth Bay	E E E	0 0 0	0 0 0	0 0 0	6,800 0 0	0 0 0	SURVEYED A,D,E & F FORKS, SAW FISH ONLY IN A FORK.

-Continued-

Appendix F.1. (page 45 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
	07/24/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	23,500	0	
	07/26/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	28,500	0	
	07/31/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	105,000	0	
	08/06/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	193,000	0	
	08/23/1999	Witteveen	Stream Mouth Bay	G G G	0 0 0	4,250 0 0	0 0 0	323,000 0 0	0 0 0	DIFFICULT ID ON 4,000 OF SOCKEYE MANY FISH IN LOWER MAIN STEM
	08/28/1999	Dan Connolly	Stream Mouth Bay	G G	0 0	1,500 0	0 0	378,000 0	0 0	NOTHING SEEN AT MOUTH.
E. Of Mino Creek, 283-7002	07/16/1999	Witteveen	Stream Mouth Bay	G F	0 0	0 0	0 0	0 0	0 0	SURVEYED MOUTH ONLY
	07/31/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	4,000	0	
	08/06/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	8,000	0	
	08/14/1999	Witteveen	Stream Mouth Bay	F P P	0 0 0	0 0 0	0 0 0	76,000 0 0	0 0 0	SURVEYED 1 MILE UP FROM FORKS. UPPER RIVER SLOW, PRETTY EVEN DISTRIBUTION ABOUT HALFWAY DOWN.
	08/28/1999	Dan Connolly	Stream Mouth Bay	G G	0 0	0 0	0 0	92,000 0	0 0	NOTHING SEEN AT MOUTH.

187

-Continued-

Appendix F.1. (page 46 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
Mcginty's Point, 283-7003										
	07/13/1999		Stream	G	0	0	0	0	0	SURVEYED ONLY HALF MILE.
		Witteveen	Mouth	F	0	0	0	0	0	
			Bay	F						
	07/31/1999		Stream	G	0	0	0	200	0	
		Arnie Shaul	Mouth							
			Bay							
	08/06/1999		Stream	G	0	0	0	1,600	0	
		Arnie Shaul	Mouth							
			Bay							
	08/09/1999		Stream	G	0	0	0	2,800	0	1500 IN HOLES NEAR OUTLET.
		Dan Connolly	Mouth	F	0	0	0	0	0	
			Bay	F	0	0	0	0	0	
	08/14/1999		Stream	F	0	0	0	24,000	0	MOST FISH IN LOWER HALF OF RIVER.
		Witteveen	Mouth	P	0	0	0	2,000	0	
			Bay	P	0	0	0	0	0	
	08/28/1999		Stream	G	0	0	0	26,000	0	
		Dan Connolly	Mouth	G	0	0	0	1,500	0	
			Bay							
Near Egg Island, 284-1101										
	08/07/1999		Stream	G	0	0	0	200	0	
		Arnie Shaul	Mouth	G	0	0	0	500	0	
			Bay							
	08/20/1999		Stream	F	0	0	0	2,000	400	POOR LIGHT
		Arnie Shaul	Mouth	F						
			Bay	F						
	09/05/1999		Stream	G	0	0	0	5,000	1,000	SPECIES COMP. ROUGH. TURBULENT
		Arnie Shaul	Mouth							
			Bay							
Hansen's Creek, 284-1201										
	08/20/1999		Stream	F	0	1,000	0	600	0	POOR LIGHT.
		Arnie Shaul	Mouth	F						
			Bay	F						

-Continued-

Appendix F.1. (page 47 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
	09/05/1999	Armie Shaul	Stream	G	0	400	0	15,000	0	
			Mouth Bay	G	0	0	0	0	0	
Middle Lagoon, 284-1205	07/06/1999	Armie Shaul	Stream Mouth Bay	G	0	100	0	0	0	SURVEYED UP TO 96 WEIR SITE. LOW TIDE.
	07/09/1999	Armie Shaul	Stream Mouth Bay	G	0	0	0	0	0	SURVEYED UP TO 96 WEIR SITE.
	07/21/1999	Armie Shaul	Stream Mouth Bay	G	0	200	0	0	0	SURVEYED BELOW RECENT WEIR SITE.
	07/26/1999	Armie Shaul	Stream Mouth Bay	F	0	0	0	0	0	POOR LIGHT.
	07/31/1999	Armie Shaul	Stream Mouth Bay	G	0	1,000	0	0	0	UP TO 1996 WEIR SITE.
	08/07/1999	Armie Shaul	Stream Mouth Bay	G	0	700	0	0	0	SURVEYED UP TO 1996 WEIR SITE.
	08/20/1999	Armie Shaul	Stream Mouth Bay	F F F	0	0	0	0	0	SURVEYED BELOW 96 WEIR SITE ONLY
	09/02/1999	Armie Shaul	Stream Mouth Bay	F	0	2,200	0	0	0	2,000 REDS SPAWNING IN MORZHOVOI LAKE AND 200 SPAWNING IN LAKE OUTLET. UNABLE TO SEE ANY COHO IN LAGOON.
	09/13/1999	Armie Shaul	Stream Mouth Bay	F	0	4,300	0	0	0	SAW NOTHING IN LAGOON. 300 SPAWNING IN MORZHOVOI LAKE OUTLET, REST SPAWNING IN LAKE.
	10/01/1999	Armie Shaul	Stream Mouth Bay	F	0	13,700	0	0	0	SURVEYED MORZHOVOI LAKE AND IT'S OUTLET ONLY. 200 SPAWNING IN OUTLET, REST SPAWNING IN LAKE.

189

-Continued-

Appendix F.1. (page 48 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
	10/13/1999	Arnie Shaul	Stream Mouth Bay	G	0	5,600	0	0	0	SURVEYED MORZHOVOI LAKE AND IT'S OUTLET, ONLY 300 WERE SPAWNING IN OUTLET.
Cannery Creek, 284-1211	09/05/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	1,400	0	
Little John Lgn Sspt, 284-1212	09/05/1999	Arnie Shaul	Stream Mouth Bay	G G	0 0	0 0	0 0	0 0	0 500	ADDITIONAL 100 PINK CARCASSES.
Little John Lgn Strm, 284-1213	08/20/1999	Arnie Shaul	Stream Mouth Bay	G F F	0 0	0 0	0 0	300 0	400 300	ADDITIONAL 200 CHUMS ALONG BEACH, COULDN'T SEE IN DEEP WATER. NO JUMPERS.
	09/05/1999	Arnie Shaul	Stream Mouth Bay	E F	0 0	0 0	0 0	500 0	12,000 300	
Sandy Cove Stream, 284-2001	08/07/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	0	1,700	
	08/20/1999	Arnie Shaul	Stream Mouth Bay	E E E	0	0	0	1,000	13,000	
	09/05/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	0	27,000	
Mcginty's Creek, 284-2003	07/27/1999	Joe Dinnocenzo	Stream Mouth Bay	F F P	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	LOW LIGHT, DARK BOTTOM, WATER CHOPPY IN BAY.
	07/31/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	4,000	0	

-Continued-

Appendix F.1. (page 49 of 65)

Stream	Date	Observer	Location	Visi- bility	Species			Chum	Observer Remarks	
					Chinook	Sockeye	Coho			
	08/06/1999	Arnie Shaul	Stream Mouth Bay	F	0	0	0	4,000	0	POOR LIGHT, HIGH WATER.
	08/07/1999	Arnie Shaul	Stream Mouth Bay	G G G	0	0	0	4,000	0	
	08/13/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	8,000	0	
	08/20/1999	Arnie Shaul	Stream Mouth Bay	G G G	0	0	0	16,000	0	
	09/05/1999	Arnie Shaul	Stream Mouth Bay	G G	0 0	0 0	0 0	34,000 5,000	0 0	
Sw Bight Creek, 284-2004	07/27/1999	Joe Dinnocenzo	Stream Mouth Bay	G G P	0 0 0	0 0 0	0 0 0	1,200 0 0	0 0 0	SAW 1 JUMPER ALONG BEACH BUT COULD SEE NO FISH UNDER IT. LOW LIGHT, CHOPPY WATER IN BAY.
	08/06/1999	Arnie Shaul	Stream Mouth Bay	E	0	0	0	2,200	0	
	08/13/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	3,400	0	
	08/20/1999	Arnie Shaul	Stream Mouth Bay	G G G	0	0	0	4,500	0	
	09/05/1999	Arnie Shaul	Stream Mouth Bay	G G	0 0	0 0	0 0	8,000 500	0 0	
Thin Pt Lgn & Entr., 284-2006	07/06/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	0	0	NOTHING, LOW TIDE.

191

-Continued-

Appendix F.1. (page 50 of 65)

192

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
	07/08/1999	Joe Dinnocenzo	Stream Mouth Bay	G G	0 0	0 0	0 0	0 0	0 0	GOOD CONDITIONS BUT LOW TIDE. NO FISH
	07/18/1999	Arnie Shaul	Stream Mouth Bay	F	0	1,500	0	0	0	1,000 TO 2,000 SOCKEYE.
	07/21/1999	Arnie Shaul	Stream Mouth Bay	G	0	1,000	0	0	0	
	07/26/1999	Arnie Shaul	Stream Mouth Bay	G	0	5,000	0	0	0	
	07/27/1999	Joe Dinnocenzo	Stream Mouth Bay	F P P	0 0 0	3,100 0 0	0 0 0	0 0 0	0 0 0	SURVEYED LAGOON AND STREAM TO LAKE. SAW 1 JUMPER OFF BEACH, BUT WATER WAS CHOPPY AND LIGHT LOW. LOW TIDE.
	07/31/1999	Arnie Shaul	Stream Mouth Bay	F	0	9,000	0	0	0	HIGH TIDE, GOOD VISIBILITY IN UPPER LAGOON, FAIR IN LOWER END.
	08/06/1999	Arnie Shaul	Stream Mouth Bay	F	0	5,000	0	0	0	GOOD WATER FLOW OVER FLATS. SOME MAY HAVE MOVED INTO LAKE.
	08/07/1999	Arnie Shaul	Stream Mouth Bay	F	0	4,000	0	0	0	LOW TIDE.
	08/13/1999	Arnie Shaul	Stream Mouth Bay	F	0	5,000	0	0	0	
	08/20/1999	Arnie Shaul	Stream Mouth Bay	F F F	0	8,500	0	0	0	SOME OLD ONES IN UPPER END.
	09/01/1999	Arnie Shaul	Stream Mouth Bay	F	0	5,500	5,000	0	0	SPECIES COMPOSITION VERY ROUGH. GOOD LIGHT.

-Continued-

Appendix F.1. (page 51 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
	09/11/1999	Armie Shaul	Stream Mouth Bay	G	0	3,000	4,500	0	0	SPECIE COMPOSITION VERY ROUGH.
Thin Pt. Lake Strm, 284-2009	09/01/1999	Armie Shaul	Stream Mouth Bay	G	0	2,400	0	0	0	
Thin Pt. Lake, 284-2010	09/01/1999	Armie Shaul	Stream Mouth Bay	G	0	1,800	0	0	0	GOOD VISIBILITY ON SOUTHERN HALF OF EAST SHORE. NORTH HALF TOO MURKY, LIKELY TWICE AS MANY FISH.
Fox Island Anc. East, 284-3101	07/26/1999	Armie Shaul	Stream Mouth Bay	G	0	0	0	0	0	
	07/31/1999	Armie Shaul	Stream Mouth Bay	G	0	0	0	800	0	
	08/06/1999	Armie Shaul	Stream Mouth Bay	F	0	0	0	8,000	0	POOR LIGHT
	08/13/1999	Armie Shaul	Stream Mouth Bay	G G	0 0	0 0	0 0	25,000 3,000	0 0	
	09/05/1999	Armie Shaul	Stream Mouth Bay	E G	0 0	0 0	0 0	111,000 10,000	0 0	LOADED.
Fox Island Anc. Ctr., 284-3102	08/06/1999	Armie Shaul	Stream Mouth Bay	G	0	0	0	2,000	0	
	09/05/1999	Armie Shaul	Stream Mouth Bay	E G	0 0	0 0	0 0	12,000 5,000	0 0	

-Continued-

Appendix F.1. (page 52 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
Fox Island Anc. West, 284-3103										
	07/21/1999	Arnie Shaul	Stream	G	0	0	0	100	0	
			Mouth Bay	G	0	0	0	0	0	
	07/31/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	7,000	0	
	08/06/1999	Arnie Shaul	Stream Mouth Bay	F	0	0	0	19,000	0	POOR LIGHT, HIGH WATER.
	08/13/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	21,000	0	
	09/05/1999	Arnie Shaul	Stream	E	0	0	0	95,000	0	
			Mouth Bay	F	0	0	0	5,000	0	
Paw Cape (deer Isl.), 284-3105										
	08/06/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	1,600	0	
	08/20/1999	Arnie Shaul	Stream Mouth Bay	G G G	0	0	0	29,000	0	
	09/05/1999	Arnie Shaul	Stream	G	0	0	0	38,000	0	AMAZING ESCAPEMENT
			Mouth Bay	G	0	0	0	0	0	
Southern Creek, 284-3106										
	07/21/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	11,500	0	
	07/26/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	23,500	0	

-Continued-

Appendix F.1. (page 53 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
	07/31/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	49,000	0	
	08/06/1999	Arnie Shaul	Stream Mouth Bay	E	0	0	0	77,000	0	LOOKS GOOD.
	08/20/1999	Arnie Shaul	Stream Mouth Bay	G G G	0	0	0	251,000	0	LOADED AND A LOT MORE TO COME.
	09/05/1999	Arnie Shaul	Stream Mouth Bay	E	0	0	0	290,000	0	
195 Eastern Creek, 284-3110	07/21/1999	Arnie Shaul	Stream Mouth Bay	G G	0 0	0 0	0 0	100 0	0 0	
	07/26/1999	Arnie Shaul	Stream Mouth Bay	G G	0 0	0 0	0 0	1,600 4,000	0 0	
	07/31/1999	Arnie Shaul	Stream Mouth Bay	G G	0 0	0 0	0 0	10,000 5,000	0 0	
	08/06/1999	Arnie Shaul	Stream Mouth Bay	G F	0 0	0 0	0 0	18,000 5,000	0 0	LOOKS GOOD.
	08/13/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	20,000	0	2 BOATS
	09/05/1999	Arnie Shaul	Stream Mouth Bay	G G	0 0	0 0	0 0	48,000 10,000	0 0	20,000 WERE BELOW FIRST BEND.
	07/27/1999	Joe Dinnocenzo	Stream Mouth Bay	G G	0 0	0 0	0 0	0 0	0 0	SURVEYED LAGOON AND CREEK, NO FISH SEEN LOW TIDE.

-Continued-

Appendix F.1. (page 54 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
	08/07/1999	Arnie Shaul	Stream Mouth Bay	E	0	0	0	0	1,200	MOST WERE SPAWNING
	09/01/1999	Arnie Shaul	Stream Mouth Bay	G G	0 0	50 0	0 0	0 0	2,000 0	GOOD LIGHT
	09/11/1999	Arnie Shaul	Stream Mouth Bay	G	0	100	0	0	0	
W Side King Cove Lgn, 284-3303	09/05/1999	Arnie Shaul	Stream Mouth Bay	G G	0 0	0 0	0 0	200 0	200 2,000	
Head King Cove Lgn, 284-3304	09/05/1999	Arnie Shaul	Stream Mouth Bay	G G	0 0	0 0	0 0	0 8,000	500	
Ram's Creek, 284-3305	08/13/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	3,500	0	
	08/20/1999	Arnie Shaul	Stream Mouth Bay	G G G	0	0	0	10,300	0	4,300 WERE ABOVE ROAD
	09/05/1999	Arnie Shaul	Stream Mouth Bay	E G	0 0	0 0	0 0	73,000 20,000	0 0	14,000 ABOVE CULVERTS. 50,000 IN LOWER 300 YARDS.
Mortensen Lagoon, 284-3401	07/08/1999	Joe Dinnocenzo	Stream Mouth Bay	G G	0 0	0 0	0 0	0 0	0 0	GOOD CONDITIONS, BUT LOW TIDE. NO FISH
DUE	08/20/1999	Arnie Shaul	Stream Mouth Bay	G G G	0	200	0	0	0	LAKE AND CREEK MOUTH WERE IMPOSSIBLE TO SURVEY TO ALGAE BLOOM.

-Continued-

Appendix F.1. (page 55 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
	09/01/1999	Arnie Shaul	Stream	G	0	1,300	0	0	0	
			Mouth Bay	G	0	1,200	0	0	0	
	09/13/1999	Arnie Shaul	Stream	G	0	1,500	0	0	0	SURVEYED SPAWNING STREAM AND IT'S MOUTH ONLY.
			Mouth Bay	G	0	600	0	0	0	
	10/01/1999	Arnie Shaul	Stream	G	0	600	0	0	0	
			Mouth Bay	G	0	0	0	0	0	
Russel Creek, 284-3402	07/21/1999	Arnie Shaul	Stream	G	0	0	0	0	1,600	
			Mouth Bay							
	07/31/1999	Arnie Shaul	Stream	G	0	0	0	0	12,000	4,000 WERE ABOVE HATCHERY.
			Mouth Bay							
	08/07/1999	Arnie Shaul	Stream	E	0	0	0	0	13,000	
			Mouth Bay	E						
	08/20/1999	Arnie Shaul	Stream	G	0	0	0	0	31,000	
			Mouth Bay	G						
	09/01/1999	Arnie Shaul	Stream	G	0	300	0	0	41,000	29,000 CHUMS ABOVE HATCHERY.
			Mouth Bay							
	09/13/1999	Arnie Shaul	Stream	G	0	450	0	1,000	57,000	49,000 CHUMS ABOVE HATCHERY.
			Mouth Bay							
	10/01/1999	Arnie Shaul	Stream	F	0	0	1,000	0	0	
			Mouth Bay							
Trout Creek, 284-3403	08/26/1999	Arnie Shaul	Stream	G	0	70	0	30	500	
			Mouth Bay							

197

-Continued-

Appendix F.1. (page 56 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
	10/06/1999	Arnie Shaul	Stream Mouth Bay	G	0	3	440	0	2	REDS, CHUMS, AND 43 COHO BELOW ROAD. 25 COHO BETWEEN ROAD AND RUNWAY. REST WERE IN NEXT 1/2 MILE ABOVE RUNWAY.
Kinzarof Lgn, North, 284-3405	08/26/1999	Arnie Shaul	Stream Mouth Bay	G	0	300	0	0	0	
Kinzarof Lagoon, 284-3407	08/26/1999	Arnie Shaul	Stream Mouth Bay	G	0	1,100	0	0	100	
Barney's Creek, 284-3409	08/07/1999	Joe Dinnocenzo	Stream Mouth Bay	G G	0 0	0 0	0 0	1,000 0	0 0	
	08/13/1999	Arnie Shaul	Stream Mouth Bay	G G	0 0	0 0	0 0	5,000 8,000	0 0	
	09/05/1999	Arnie Shaul	Stream Mouth Bay	G G	0 0	0 0	0 0	2,000 12,000	5,000 600	ONLY SURVEYED SPRING AREA. SOUTH CHANNEL DRY. TURBULENT.
	09/07/1999	Arnie Shaul	Stream Mouth Bay	G G	0 0	0 0	0 0	36,000 20,000	2,000 3,000	
Delta Crk. Lenard Hb, 284-3410	08/07/1999	Joe Dinnocenzo	Stream Mouth Bay	F F	0 0	0 0	0 0	0 0	1,400 0	MAIN STEM MURKY
	08/13/1999	Arnie Shaul	Stream Mouth Bay	P P	0 0	0 0	0 0	200 0	2,000 0	COULD ONLY SURVEY CREAM TRIBS., MAIN STEM TOO MURKY FROM GLACIAL RUNOFF.
	08/20/1999	Arnie Shaul	Stream Mouth Bay	G G G	0	0	0	3,200	2,400	

-Continued-

Appendix F.1. (page 57 of 65)

Stream	Date	Observer	Location	Visi- bility	Species				Observer Remarks
					Chinook	Sockeye	Coho	Pink	
09/05/1999 Arnie Shaul	Stream	G	0	0	0	5,000	17,000	TURBULENT.	
	Mouth Bay	G	0	0	0	0	4,000		
09/07/1999 Arnie Shaul	Stream	E	0	0	0	11,000	0	SURVEYED NORTH FORK ONLY, DIDN'T SURVEY ON 9/05 DUE TO TURBULENCE.	
	Mouth Bay								
10/13/1999 Arnie Shaul	Stream	G	0	0	130	0	0		
	Mouth Bay								
Lenard Hbr. South, 284-3411 08/07/1999 Joe Dinnocenzo	Stream	F	0	0	0	0	0	LOW LIGHT COMBINED WITH DARK BOTTOM MADE SEEING FISH TOUGH	
	Mouth Bay	F	0	0	0	1,500	0		
08/13/1999 Arnie Shaul	Stream	G	0	0	0	1,000	0		
	Mouth Bay	G	0	0	0	3,000	0		
09/05/1999 Arnie Shaul	Stream	G	0	0	0	19,000	0		
	Mouth Bay	G	0	0	0	0	0		
Unnamed Lenard Hbr., 284-3412 09/05/1999 Arnie Shaul	Stream	G	0	0	0	1,700	0		
	Mouth Bay	G	0	0	0	200	0		
Belkofski Village Cr, 284-4101 08/06/1999 Arnie Shaul	Stream	E	0	0	0	11,000	0		
	Mouth Bay								
08/07/1999 Joe Dinnocenzo	Stream	G	0	0	0	17,000	0		
	Mouth Bay	G	0	0	0	500	0		
08/13/1999 Arnie Shaul	Stream	E	0	0	0	18,000	0		
	Mouth Bay	G	0	0	0	8,000	0		

-Continued-

Appendix F.1. (page 58 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
	08/20/1999	Armie Shaul	Stream	G	0	0	0	31,000	0	
			Mouth	G	0	0	0	4,000	0	
			Bay	G						
	09/05/1999	Armie Shaul	Stream	E	0	0	0	75,000	0	
			Mouth	G	0	0	0	1,000	0	
			Bay							
Slavna Point, 284-4202	08/20/1999	Armie Shaul	Stream	G	0	0	0	1,400	0	
			Mouth	G	0	0	0	4,000	0	
			Bay	G						
Indian Head, 284-4203	08/13/1999	Armie Shaul	Stream	G	0	0	0	0	0	
			Mouth	G	0	0	0	3,000	0	
			Bay							
	09/05/1999	Armie Shaul	Stream	E	0	0	0	13,000	0	
			Mouth	G	0	0	0	6,000	0	
			Bay	G	0	0	0	25,000	0	
Belkofski Bay, West, 284-4205	08/07/1999	Joe Dinnocenzo	Stream	G	0	0	0	6,000	0	
			Mouth	G	0	0	0	0	0	
			Bay							
	08/13/1999	Armie Shaul	Stream	G	0	0	0	10,000	0	
			Mouth							
			Bay							
	09/05/1999	Armie Shaul	Stream	G	0	0	0	27,000	0	PACKED.
			Mouth	G	0	0	0	500	0	
			Bay	G	0	0	0	4,000	0	
Belkofski Bay Beach, 284-4206	08/20/1999	Armie Shaul	Stream	G	0	0	0	500	0	
			Mouth	G	0	0	0	1,000	0	
			Bay	G						
	09/07/1999	Armie Shaul	Stream	G	0	0	0	5,000	0	
			Mouth	G	0	0	0	200	0	
			Bay							

-Continued-

Appendix F.1. (page 59 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
Belkofski Bay River, 284-4207										
	08/07/1999		Stream	P	0	0	0	0	5,300	ALL FISH IN STREAM SEEN ABOVE GLACIAL FORK.
		Joe Dinnocenzo	Mouth	P	0	0	0	2,000	0	
			Bay							
	08/13/1999		Stream	G	0	0	0	0	1,100	ADDITIONAL 32,000 CHUMS IN CAPTAINS HARBOR.
		Arnie Shaul	Mouth	G	0	0	0	0	4,000	
			Bay							
	09/07/1999		Stream	E	0	0	0	7,000	63,000	ADDITIONAL 1,000 PINKS AND 4,000 CHUMS IN CAPTAINS HARBOR.
		Arnie Shaul	Mouth	E	0	0	0	0	20,000	
			Bay							
Captain's Harbor, 284-4209										
	08/20/1999		Stream	G	0	0	0	200	0	
		Arnie Shaul	Mouth	G						
			Bay	G						
	09/05/1999		Stream	G	0	0	0	6,000	300	ONLY SAW ABOUT 1,000 CHUMS IN HARBOR.
		Arnie Shaul	Mouth							
			Bay							
	09/07/1999		Stream	E	0	0	0	14,000	200	BETTER CONDITIONS THAN ON 9/05. ADDITIONAL 1,000 PINKS AND 4,000 CHUMS IN HARBOR WILL PROBABLY SPAWN IN BELKOFSKI RIVER.
		Arnie Shaul	Mouth	F	0	0	0	0	0	
			Bay							
Kitchen Anchorage, 284-4210										
	08/13/1999		Stream	G	0	0	0	0	0	FISH AT MOUTH LOOKED FAIRLY FRESH.
		Arnie Shaul	Mouth	G	0	0	0	5,000	0	
			Bay							
	08/20/1999		Stream	G	0	0	0	200	0	
		Arnie Shaul	Mouth	G	0	0	0	24,000	0	
			Bay	G						
	09/07/1999		Stream	E	0	0	0	10,000	0	
		Arnie Shaul	Mouth	G	0	0	0	20,000	0	
			Bay							
Rocky River, 284-4212										
	08/06/1999		Stream	G	0	0	0	2,000	0	
		Arnie Shaul	Mouth							
			Bay							

-Continued-

Appendix F.1. (page 60 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks	
					Chinook	Sockeye	Coho	Pink	Chum		
	08/07/1999	Joe Dinnocenzo	Stream	G	0	0	0	11,000	0		
			Mouth	G	0	0	0	500	0		
			Bay								
	08/13/1999	Arnie Shaul	Stream	G	0	0	0	9,000	0	SMALL SCHOOLS OF FRESH FISH MOVING TOWARDS STREAM FROM THE NORTH.	
			Mouth								
			Bay								
	08/20/1999	Arnie Shaul	Stream	G	0	0	0	11,000	0		
			Mouth	G	0	0	0	30,000	0		
			Bay	G							
	09/05/1999	Arnie Shaul	Stream	E	0	0	0	32,000	0		
			Mouth	G	0	0	0	15,000	0		
			Bay								
202	Dolgoi Hbr, Nw, 284-5103	09/05/1999	Arnie Shaul	Stream	G	0	0	0	2,000	0	
				Mouth	G	0	0	0	10,000	0	
				Bay	G	0	0	0	10,000	0	
	Dolgoi Hbr, South, 284-5105	09/05/1999	Arnie Shaul	Stream	G	0	0	0	1,000	0	
				Mouth	G	0	0	0	5,000	0	
				Bay							
	Dolgoi Hbr, Sw, 284-5106	08/07/1999	Joe Dinnocenzo	Stream	F	0	0	0	1,800	0	
				Mouth	F	0	0	0	200	0	
				Bay							
	08/13/1999	Arnie Shaul	Stream	G	0	0	0	3,200	0	1 BOAT.	
			Mouth	G	0	0	0	500	0		
			Bay								
	09/05/1999	Arnie Shaul	Stream	G	0	0	0	8,100	0		
			Mouth	G	0	0	0	6,000	0		
			Bay	F	0	0	0	1,000	0		
	Nikolaski, 284-5201	08/06/1999	Arnie Shaul	Stream	G	0	0	0	5,600	0	
				Mouth							
				Bay							

-Continued-

Appendix F.1. (page 61 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
	08/13/1999	Arnie Shaul	Stream	G	0	0	0	9,000	0	
			Mouth	G	0	0	0	500	0	
			Bay							
	08/20/1999	Arnie Shaul	Stream	G	0	0	0	16,000	0	LOOKS GOOD.
			Mouth	G	0	0	0	5,000	0	
			Bay	G						
	09/05/1999	Arnie Shaul	Stream	G	0	0	0	44,000	0	
			Mouth	G	0	0	0	20,000	0	
			Bay							
Little Bear Bay, 284-5203										
08/07/1999	Joe Dinnocenzo	Stream	F	0	0	0	0	0	MURKY WATER, BUT NO FISH SEEN IN STREAM, ONE JUMPER SEEN IN THE BAY.	
		Mouth	P	0	0	0	0	0		
		Bay	P	0	0	0	0	0		
08/20/1999	Arnie Shaul	Stream	E	0	0	0	0	0	LOW WATER FLOW.	
		Mouth	G	0	0	0	7,000	0		
		Bay	G	0	0	0	1,000	5,000		
09/07/1999	Arnie Shaul	Stream	E	0	0	0	0	2,000	MAIN STREAM MOSTLY DRY, CHUMS IN SPRING AREA.	
		Mouth	G	0	0	0	12,000	2,000		
		Bay								
Stub Creek, 284-5204										
08/20/1999	Arnie Shaul	Stream	G	0	0	0	0	0		
		Mouth	G	0	0	0	10,000	0		
		Bay	G							
09/07/1999	Arnie Shaul	Stream	G	0	0	0	14,000	0		
		Mouth	G	0	0	0	35,000	0		
		Bay								
Stream Guard Creek, 284-5205										
08/07/1999	Joe Dinnocenzo	Stream	F	0	0	0	200	30		
		Mouth	F	0	0	0	500	0		
		Bay	F	0	0	0	1,300	0		
09/07/1999	Arnie Shaul	Stream	G	0	0	0	0	200		
		Mouth	G	0	0	0	5,000	4,000		
		Bay								

-Continued-

Appendix F.1. (page 62 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
West Spring Holes, 284-5206										
	08/07/1999	Joe Dinnocenzo	Stream	P	0	0	0	0	0	MURKY WATER, TOO MURKY TO SEE FISH EXCEPT IN SHALLOW WATER.
			Mouth	P	0	0	0	0	0	
			Bay	P	0	0	0	0	0	
	08/13/1999	Arnie Shaul	Stream	G	0	0	0	700	100	
			Mouth	F	0	0	0	0	3,000	
			Bay							
	08/20/1999	Arnie Shaul	Stream	G	0	0	0	1,000	200	SEE BAY SURVEY AND REMARKS FOR 284-5208
			Mouth	G	0	0	0	0	11,000	
			Bay	G						
	09/07/1999	Arnie Shaul	Stream	E	0	0	0	23,000	2,000	SPECIES COMP. OF FISH AT MOUTH VERY ROUGH.
			Mouth	G	0	0	0	40,000	10,000	
			Bay							
Volcano Sloughs-ctr, 284-5207										
	08/13/1999	Arnie Shaul	Stream							SURVEYED FLATS ONLY.
			Mouth	G	0	0	0	0	0	
			Bay							
	08/20/1999	Arnie Shaul	Stream	G	0	0	0	0	500	SEE BAY COUNT AND REMARKS FOR 284-5208
			Mouth	G	0	0	0	0	8,000	
			Bay	G						
	09/07/1999	Arnie Shaul	Stream	E	0	0	0	3,000	13,000	
			Mouth	G	0	0	0	0	30,000	
			Bay							
Volcano River, 284-5208										
	08/13/1999	Arnie Shaul	Stream	E	0	0	0	700	800	
			Mouth	G	0	0	0	0	0	
			Bay							
	08/20/1999	Arnie Shaul	Stream	E	0	0	0	2,000	300	15,000 OF THE FISH IN BAY WERE IN DEEP ABOVE NORMAL MARKERS.
			Mouth	G	0	0	0	0	5,000	
			Bay	G	0	0	0	0	59,000	
	09/07/1999	Arnie Shaul	Stream	E	0	0	0	9,000	33,000	SAW NONE OUTSIDE MARKERS.
			Mouth	G	0	0	0	0	15,000	
			Bay							

-Continued-

Appendix F.1. (page 63 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
Dushkin Lagoon, 284-5210										
	09/07/1999		Stream	G	0	0	0	0	100	
		Arnie Shaul	Mouth	G	0	0	0	0	200	
			Bay							
Ikatan Pt Stream, 284-6001										
	08/07/1999		Stream	G	0	0	0	0	0	
		Arnie Shaul	Mouth							
			Bay							
	09/05/1999		Stream	G	0	0	0	1,000	200	
		Arnie Shaul	Mouth							
			Bay							
Swede's Lake, 284-6003										
	08/07/1999		Stream	G	0	1,500	0	0	0	
		Arnie Shaul	Mouth							
			Bay							
	09/05/1999		Stream	G	0	900	0	200	0	200 REDS SCHOOLED
		Arnie Shaul	Mouth	G	0	0	0	0	0	
			Bay							
Ikatan River, 284-6004										
	09/05/1999		Stream	G	0	0	0	3,000	0	SURVEYED CLEAR FORK ONLY.
		Arnie Shaul	Mouth							
			Bay							
Whirl Point, 284-6005										
	08/07/1999		Stream	G	0	0	0	0	0	
		Arnie Shaul	Mouth							
			Bay							
	08/20/1999		Stream	G	0	0	0	300	0	POOR LIGHT.
		Arnie Shaul	Mouth	F	0	0	0	500	0	
			Bay	F						
	09/05/1999		Stream	G	0	0	0	4,500	400	
		Arnie Shaul	Mouth	G	0	0	0	2,000	0	
			Bay							
Sankin Bay Creek, 284-6006										
	08/07/1999		Stream	G	0	0	0	500	0	
		Arnie Shaul	Mouth							
			Bay							

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Appendix F.1. (page 64 of 65)

206

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
	09/05/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	700	300	
	09/13/1999	Joe Dinnocenzo	Stream Mouth Bay	G F	0 0	0 0	0 0	300 0	0 0	
Whalebone Bay, 284-6007	08/07/1999	Arnie Shaul	Stream Mouth Bay	G	0	800	0	0	0	
	09/13/1999	Joe Dinnocenzo	Stream Mouth Bay	G F	0 0	2 0	0 0	1,200 0	0 0	REDS IN LAKE, PROBABLY MORE THERE, MURKY WATER, HI GLARE. 700 PINKS ABOVE LAKE, 500 PINKS BELOW LAKE. SURVEYED 3 MILES ABOVE LAKE.
Deadman's Cove, 284-6008	08/07/1999	Arnie Shaul	Stream Mouth Bay	G	0	800	0	800	0	NO SPAWNING YET.
	08/20/1999	Arnie Shaul	Stream Mouth Bay	F F F	0	1,000	0	5,000	0	POOR LIGHT
	09/13/1999	Joe Dinnocenzo	Stream Mouth Bay	G F	0 0	3,000 0	200 0	5,200 0	0 0	ALL REDS IN 2 LAKES IN HEAD WATERS. ALL COHO JUST ABOVE MOUTH, AND ADDITIONAL 500 PINK CARCASSES.
Lazaref River, 285-4005	09/13/1999	Joe Dinnocenzo	Stream Mouth Bay	F P	0 0	0 0	0 0	300 0	100 0	SURVEYED CLEAR TRIBUTARIES (EAST FORKS) WATER GLACIAL IN WEST FORK, UNSURVEYABLE.
Otter Cove, West, 285-4008	09/05/1999	Arnie Shaul	Stream Mouth Bay	G	0	0	0	2,400	700	
Otter Cove, East, 285-4009	09/05/1999	Arnie Shaul	Stream Mouth Bay	E	0	0	0	8,000	200	

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Appendix F.1. (page 65 of 65)

Stream	Date	Observer	Location	Visi- bility	Species					Observer Remarks
					Chinook	Sockeye	Coho	Pink	Chum	
Dora Harbor - Left, 285-5000										
	09/05/1999		Stream	G	0	0	0	0	0	
		Arnie Shaul	Mouth Bay	G	0	0	0	0	0	

Appendix F. 2. South Unimak and Shumagin Islands June fisheries, Southeastern District Mainland fishery, and post June fishery histories.

South Unimak and Shumagin Islands June Fishery

The South Unimak and Shumagin Islands June management strategy was decided on a year-by-year basis from 1972-1974 due to very low projected Bristol Bay sockeye salmon returns. In 1974, the South Unimak and Shumagin Islands June fisheries were closed because of a weak Bristol Bay run. In 1975, the Alaska Board of Fisheries (BOF) implemented an allocation plan where the South Unimak and Shumagin Islands June fisheries would be granted an annual guideline harvest level (GHL) based on the predicted Bristol Bay inshore sockeye salmon harvest. Based on historical catch data, 6.8% of the forecasted inshore Bristol Bay harvest was allocated to the South Unimak June fishery and 1.5% was allocated to the Shumagin Islands fishery. To reduce the possibility of overharvesting any segment of the Bristol Bay run the GHL was apportioned to discrete time periods based on historical catch data. The distribution of the allocation by time period and percent was as follows:

<u>Time Periods</u>	<u>South Unimak</u>	<u>Shumagin Islands</u>
June 1 - 11	5%	9%
12 - 18	29%	28%
19 - 25	51%	41%
<u>26 - 30</u>	<u>15%</u>	<u>22%</u>
Total	100%	100%

If the guideline harvest for an individual time period was not reached, the unharvested portion was lost to the fisheries. If the guideline harvest for an individual time period was exceeded, the overharvest was subtracted from the total season allocation.

Chum salmon are also harvested during the South Unimak and Shumagin Islands June fisheries. In 1982, an unusually large harvest of 1,095,044 chum salmon occurred (Appendix B.4-B.6). The 1982 fall Yukon River chum salmon returns were weak and resulted in increased concerns by Arctic-Yukon-Kuskokwim (A-Y-K) permit holders who wanted to curtail or eliminate the South Peninsula June fisheries. Unlike sockeye salmon, which are predominantly bound for Bristol Bay and have recently experienced large returns; chum salmon are bound for numerous areas ranging from Japan to Kotzebue to Prince William Sound, and have recently experienced poor returns, especially in A-Y-K river systems (Eggers et al. 1991; Ogura and Ito 1994; Kron 1994; Seeb et al. 1997).

In 1984, the BOF placed further restrictions on the South Unimak and Shumagin Islands June fisheries in an attempt to decrease the chum salmon harvest. The new regulations allowed a maximum of 96 hours of fishing during a seven-day period and no more than 72 consecutive hours of fishing. This BOF action established closed fishing periods (referred to as windows) between open periods to increase the opportunity for chum salmon to escape the South Peninsula June fisheries.

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The following additional restrictions applied during the 1986 season:

1. No fishing prior to June 11.
2. No fishing during June 26-30 and the loss of that period's allocation.
3. A 400,000 chum salmon catch limit or chum cap (i.e., after 400,000 chum salmon were harvested the fishery would close; Shaul and Schwarz 1989).

These restrictions, plus low availability of sockeye salmon, resulted in only 471,397 of the 1,107,000 sockeye salmon allocation being harvested in 1986.

The fall 1986 BOF meeting adjourned (with three members resigning), without taking action on the South Unimak and Shumagin Islands June fisheries. The regulations passed in 1986 were rescinded and the 1987 fisheries were managed similar to the 1984-1985 June fisheries.

A sockeye and chum salmon tagging project was conducted in the South Unimak and Shumagin Islands fisheries during June 1987. The tagging project indicated that chum salmon harvested in the June fisheries are composed of stocks scattered all around the North Pacific and Bering Sea, from Japan to British Columbia, while the majority of the sockeye salmon were from Bristol Bay (Eggers et al. 1991).

During the spring of 1988, the BOF placed a 500,000 chum salmon harvest cap on the South Unimak and Shumagin Islands June fisheries. The 1988 South Unimak sockeye salmon harvest of 474,457 fish was only about 38% of the GHL. In 1988, the Shumagin Islands fishery harvested its sockeye salmon allocation.

In 1989, the Bristol Bay inshore sockeye salmon run was unexpectedly strong and surpassed the preseason forecast (Appendices B.7-B.9). The South Unimak and Shumagin Islands June sockeye salmon allocations were exceeded because the low Bristol Bay forecast produced relatively small South Unimak and Shumagin Islands allocations (Shaul et al. 1990).

The BOF made the following changes to the South Unimak and Shumagin Islands June fisheries after the 1989 season (Appendix B.3):

1. The starting date of the fishery was delayed until June 13 (the sockeye to chum salmon ratio usually improves after June 12).
2. The chum salmon cap for both fisheries combined was increased from 500,000 to 600,000.
3. The "window regulations" were eliminated, as BOF could not justify both a chum salmon cap and windows (Eggers et al. 1991).

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4. The sockeye salmon allocations and time periods became the same for each fishery.

<u>Time Periods</u>	<u>South Unimak and Shumagin Islands</u>
June 13 - 18	35%
19 - 25	45%
<u>26 - 30</u>	<u>20%</u>
Total	100%

If sockeye salmon catches in either fishery fell below the June 13-18 period guidelines those unharvested sockeye salmon up to a maximum of 5% of the total allocation for that fishery could be harvested during the June 19-25 period. The June 26-30 period could not be used to make up for underharvests during the first two periods. The best available data indicated that the sockeye salmon stock compositions in the June 13-18 and June 19-25 periods were very similar. However, the June 26-30 stock composition at South Unimak and the Shumagin Islands fisheries may be dominated by fewer stocks with a later run timing (Eggers et al. 1991).

5. Unlimited seine leads were eliminated at South Unimak, only leads of 50 to 150 fathoms in length are permitted for the entire Alaska Peninsula.
6. Maximum depth restrictions were placed on all seine and gillnet gear. For the entire Alaska Peninsula Area, seines may not exceed 375 meshes in depth. Seine mesh may not exceed 3-1/2 inches except the first 25 meshes above the lead line may not be more than 7 inches. Gillnet gear used in South Peninsula waters may not exceed 90 meshes in depth.
7. The area comprising the South Unimak fishery was extended to include the following portions of the Southwestern District located outside the Ikatan Bay Section:
- (a) all waters north and west of a line from Cape Pankof Light to Thin Point.
 - (b) all waters enclosed by a line from Thin Point to Stag Point on Deer Island to Dolgoi Cape and from Bluff Point on Dolgoi Island to Arch Point.

The ADF&G does not know what impact the reduction in gear depth, adopted by the BOF prior to the 1990 season, has on gear efficiency or if the gear reduction has reallocated salmon resources among gear types. Too many other factors influence the harvest each year to determine how the gear changes alone affect the harvest (Campbell et al. 1998).

In 1990, ADF&G established a test fishing program in the Shumagin Islands during June to help South Peninsula management staff determine sockeye to chum salmon ratios and salmon average weights by species (Shaul et al. 1991). The ADF&G attempts to have commercial salmon fishing periods when a high sockeye to chum salmon ratio is expected in the harvest. The sockeye to chum salmon ratio is normally low in early June, highest during mid to late June when the sockeye salmon run peaks and often drops again in late June (Shaul et al. 1992).

Before the South Unimak and Shumagin Islands June fisheries open, ADF&G conducts a test fishing program to determine the most favorable periods of sockeye to chum salmon ratios. The original ADF&G test fishing program was standardized to include only full size purse seine gear making a minimum of one 20 minute set, more sets are made if time and conditions permit, each at Popof Head, Middle Set, and Red Bluff. All these test fish sites are located on the eastside of Popof Island in the Shumagin Islands Section (Appendix D.4; McCullough and Shaul 1992). In 1994 the test fishing program was expanded to include the South Unimak area. During off-loading, the catch is separated by species, counted, and weighed. In the Shumagin Islands, purse seine vessels are selected randomly from a list of skippers that requested to participate in the test fishery. At South Unimak, ADF&G solicits bids and the lowest bidder(s) are selected to test fish.

The 1990 South Unimak sockeye salmon harvest of 1,090,710 fish was slightly above the 1,087,000 GHL (Appendix B.8). The Shumagin Islands June sockeye salmon harvest of 255,585 fish exceeded the 240,000 allocation (Appendix B.9). The combined South Unimak and Shumagin Islands June fisheries sockeye salmon GHL of 1,327,000 fish was achieved (actual harvest of 1,346,295 fish; Appendix B.7) in spite of inclement weather that plagued fishing operations (Shaul et al. 1991). The combined South Unimak and Shumagin Islands June fisheries chum salmon harvest of 518,739 was below the 600,000 chum salmon cap (Appendix B.4).

The 1991 regulations governing the South Peninsula fisheries were similar to the 1990 regulations. The South Unimak sockeye salmon catch was 1,215,658, well below the 1,573,000 allocation, and the chum salmon harvest was 670,103 (Appendix B.5). The Shumagin Islands June sockeye harvest was 333,272 salmon, slightly below the 347,000 allocation and the chum salmon harvest was 102,602 (Appendix B.6; Shaul et al. 1992). The combined South Unimak and Shumagin Islands fisheries chum salmon catch of 772,705 exceeded the 600,000 chum salmon cap and by regulation both fisheries were closed.

In November 1991, the BOF changed the South Unimak and Shumagin Islands June chum salmon cap from 600,000 fish to 40 percent of the sockeye salmon allocation, not to exceed 900,000 chum salmon. Due to the large 1992 Bristol Bay sockeye salmon forecast, the chum salmon cap was established at 900,000. The 900,000 chum salmon cap generated considerable debate between Alaska Peninsula and A-Y-K permit holders. The BOF relied extensively on the 1987 South Unimak and Shumagin Islands sockeye and chum salmon tagging study when they increased the chum cap (Eggers et al. 1991). However, an error in the 1987 ADF&G tagging project indicated the study underestimated the impact of the South Unimak and Shumagin Islands June fisheries on A-Y-K chum salmon stocks, including stocks in Norton Sound. This discovery provided the BOF with enough new information to reconsider the South Unimak and Shumagin Islands chum salmon cap. During their March 1992 meeting, the BOF changed the June fisheries chum salmon cap to an annual 700,000 fish limit (Shaul et al. 1993).

Prior to the 1992 South Peninsula June fisheries, ADF&G closed the waters around Sanak Island to commercial salmon fishing during June to minimize the harvest of chum salmon (Appendix B.2;

Shaul et al. 1993). Historically, Sanak Island waters had been fished sporadically but produced unacceptably low sockeye to chum salmon ratios.

In 1992, the South Unimak and Shumagin Islands June fisheries total sockeye salmon catch of 2,457,856 exceeded the combined June allocation of 2,391,000 and both fisheries were closed. The combined chum salmon harvest was 426,203, and well below the 700,000 cap (Appendix B.4).

In 1993, the South Unimak and Shumagin Islands fisheries combined harvest was 2,973,744 sockeye and 532,247 chum salmon, 74,744 sockeye more than the allocation and 167,753 chum salmon less than the cap.

Before the 1994 commercial salmon season, the BOF eliminated the time period requirements and designated June 13 as the earliest possible opening date of the South Unimak and Shumagin Islands June fisheries. The BOF action gave ADF&G the flexibility to establish fishing periods based on favorable sockeye to chum salmon ratios (McCullough and Pengilly 1994).

In 1994, the South Unimak and Shumagin Islands fisheries combined harvest was 1,461,263 sockeye and 582,165 chum salmon, which is 2,124,737 sockeye salmon below the GHL and 117,835 chum salmon below the cap. The GHL was not achieved because sockeye salmon were not available in large numbers in either fishery.

Following the 1994 season, the BOF made the following changes to the South Unimak and Shumagin Islands June fisheries management plan:

1. June fishery cannot begin prior to June 11.
2. After June 24, in either the South Unimak or Shumagin Islands fishery, if the sockeye salmon GHL and the maximum allowable harvest of chum salmon have not been attained, and if the ratio of sockeye to chum salmon is two to one or less on any day, the next daily fishing period for seine and drift gillnet gear shall be of six hour duration in that fishery. After June 24, the South Unimak or Shumagin Islands fishery shall close for all gear types if the ratio of sockeye to chum salmon is two to one or less for any three aggregate days.
3. The BOF stated its intent that the maximum harvest or less of 700,000 chum salmon supersedes attempts to reach the sockeye salmon guideline harvest levels.
4. The BOF eliminated the provision for the fisheries to continue into early July if weather prevented fishing at the end of June.
5. The BOF eliminated mesh size requirements for gillnets during the June fisheries.

In 1995, the South Unimak and Shumagin Islands combined harvest was 2,105,321 sockeye and 537,433 chum salmon; 1,540,679 sockeye salmon below the GHL and 162,567 chum salmon below

the 700,000 cap. The sockeye salmon GHL was not achieved, for the second consecutive year, because sockeye salmon were not available in large numbers in either fishery.

In 1996, the sockeye salmon harvest rates were extremely low in both the South Unimak and Shumagin Islands fisheries and almost continuous fishing was allowed. The combined South Unimak and Shumagin Islands harvest was 1,028,970 sockeye and 359,820 chum salmon; 1,535,030 sockeye salmon below the GHL and 340,180 chum salmon below the 700,000 cap. The sockeye salmon GHL was not achieved for the third straight year, because sockeye salmon were not available in large numbers in either fishery.

In 1997, the sockeye salmon harvest rates were low in both the South Unimak and Shumagin Islands fisheries and almost continuous fishing was allowed. The combined South Unimak and Shumagin Islands harvest was 1,628,181 sockeye and 322,325 chum salmon; 617,819 sockeye salmon below the GHL and 377,675 chum salmon below the 700,000 cap. The Shumagin Islands sockeye salmon harvest of 449,002 exceeded the 406,000 sockeye GHL. However, the South Unimak and Shumagin Islands combined sockeye salmon GHL was not achieved for the fourth straight year, because sockeye salmon were not available in large numbers in either fishery.

The BOF made the following changes that affect the South Unimak and Shumagin Islands June fisheries, during their January 1998 meeting:

1. The chum salmon cap was lowered from 700,000 to a floating cap that can range from 350,000 to 650,000 chum salmon depending on an Arctic-Yukon- Kuskokwim (A-Y-K) harvest projection based on the previous year's harvest of summer chum salmon in A-Y-K. The projected A-Y-K summer chum salmon index group harvest will be used to establish the chum salmon cap. The A-Y-K summer chum salmon index group includes chum salmon taken during Yukon River summer commercial and subsistence fisheries, the Kotzebue commercial fishery, the Norton Sound commercial fishery, and the Kuskokwim commercial fishery. Management concerns for specific chum salmon stocks in A-Y-K are also a factor in determining the cap. The 1998 chum salmon harvest cap for the South Unimak and Shumagin Islands June fishery was 350,000 to 400,000 chum salmon. This figure was based on the latest A-Y-K harvest projection, using the A-Y-K summer index group, and an identified management concern for summer chum salmon in the A-Y-K region.
2. A commercial test fishery for all gear types may open as early as June 10. However seine and drift gillnet gear may initially be allowed a six hour fishing period while set gillnet gear will be permitted a minimum of 16 hours. If the sockeye to chum salmon ratio is 2 to 1 or greater, the fishing period may be extended for seine and drift gillnet gear. The set gillnet fishing period may be extended if the set gillnet sockeye to chum salmon ratio is equal to or greater than the recent 10-year average regardless of the seine and drift gillnet ratios.

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3. In the Unimak District during June, the shoreward end of a set gillnet may not be placed further than one half mile from the mean high water mark.
4. All salmon caught by CFEC permit holders must be retained, and each CFEC permit holder must report the number of salmon caught, including those taken but not sold, on an ADF&G fish ticket. For purposes of this section, "caught" means brought on board the vessel.
5. A person may not use or employ an aircraft to locate salmon for the commercial taking of salmon or to direct commercial fishing operations in the Alaska Peninsula Area, one hour before, during, and one hour after a commercial salmon fishing period (ADF&G 1998).

The 1998 sockeye GHL for the South Unimak and Shumagin Islands fisheries was 1,529,000 and 336,000 respectively. Despite continuous fishing from June 13 through June 30, the South Unimak fishery resulted in a harvest of only 974,628 sockeye while the Shumagin Islands fishery resulted in a harvest of 314,097 sockeye. The 1998 chum salmon harvest of 245,619 chum salmon was well below the GHL of 350,000 – 400,000 salmon.

Southeastern District Mainland Fishery (SEDM)

Prior to 1974, the SEDM was generally open on a five day per week fishing schedule (Appendix D.2). From 1974 through 1977, the SEDM fishery was open on a day per day basis with the Chignik Management Area (CMA). During some years, including 1977, only limited fishing time was needed to harvest large runs in the CMA although daily harvest rates and total harvests were low in the SEDM fishery.

Before the 1978 season, the BOF restricted the SEDM fishery to three days per week, through July 10, and established set gillnet gear as the only legal gear type allowed through July 10. After July 10 both set gillnet and seine permit holders could operate in the SEDM. During the last ten years, set gillnetters have caught about 90% of the total SEDM sockeye salmon harvest through July 25, and purse seiners caught the remaining 10% (Appendix C.3). In 1978, the SEDM harvest rates through July 25 were low despite strong Chignik runs, and resulted in a SEDM catch of only 31,197 sockeye, of which 21,952 were considered Chignik bound (Appendix C.4).

Beginning with the 1979 season, the BOF increased fishing time in the SEDM from three days to five days per week but specified that a maximum of 60,000 estimated Chignik bound sockeye salmon could be harvested through July 10. The BOF stipulated that the SEDM fishery could be closed if the CMA sockeye salmon escapement requirements were not assured. The BOF also stated that if the CMA catch exceeded 1,000,000 sockeye before July 10, the SEDM fishery could continue beyond the 60,000 sockeye salmon harvest ceiling. This management plan remained in effect until 1985.

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From 1979 through 1982, the annual SEDM sockeye salmon harvest averaged 76,000 fish, with about 61,000 (5.1% of the total Chignik bound sockeye harvest) caught through July 25. These harvests were achieved in spite of numerous fishery closures imposed by the department because of poor Chignik sockeye salmon escapements. The number of active set gillnet permits, through July 25, in the SEDM increased from 23 in 1978 to 37 in 1982 (Appendix C.5).

In 1983 an estimated 227,392 Chignik bound sockeye salmon (11.4% of the total Chignik bound sockeye harvest) were caught in the SEDM fishery through July 25 (Appendix C.6). Approximately 76% of the sockeye harvest occurred after July 10.

In 1984 set gillnet effort increased to 54 permits fished through July 25. Five of the set gillnet permit holders also held purse seine permits. Due to an exceptionally strong early Chignik run, the large number of fish available in the SEDM, and increased fishing effort, only six days were required to harvest an estimated 60,000 Chignik bound sockeye salmon. The SEDM fishery was closed for only three days before the Chignik sockeye harvest reached 1,000,000 and the SEDM was reopened on June 14. The late Chignik sockeye salmon run was below the forecast and only reached its escapement goal after the SEDM, Chignik, and Cape Igvak in the Kodiak Management Area (KMA) fisheries were curtailed during mid-July. The total 1984 SEDM harvest of Chignik bound sockeye salmon through July 25 was 423,068 fish (Appendix C.6).

Before the 1985 season, the BOF developed a management plan based on the Cape Igvak Salmon Management Plan instead of using a set fishing schedule. The BOF plan directed the department to manage the fishery so that the number of sockeye salmon taken in the SEDM (exclusive of the Northwest Stepovak Section) was as near as possible to 6.2% of the total Chignik bound sockeye harvest through July 25. The department re-evaluated the data used to calculate the allocation and determined that 6.0% was the correct figure. Therefore, the BOF changed the allocation to 6.0% beginning with the 1988 season. However, before the SEDM fishery could open the following criteria had to be met:

- 1) A harvestable surplus beyond the escapement goals for the first and second runs of Chignik River system sockeye salmon was expected to be more than 600,000, and
- 2) The department determined that the runs were as strong as expected.

In years when a harvestable surplus for the first and second runs of Chignik River system sockeye salmon was expected to be less than 600,000, no commercial salmon fishery targeting Chignik sockeye was allowed in the SEDM fishery until a harvest of 300,000 was achieved in the CMA. After July 8, fishing in the SEDM might occur provided at least 300,000 sockeye salmon had been harvested in the CMA, escapement goals were being met, and the CMA harvest was anticipated to total at least 600,000.

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During 1985-91, the harvest of Chignik bound sockeye in the SEDM through July 25 averaged 88,776 fish and 5.5% of the total Chignik bound sockeye salmon harvest.

The BOF revised the SEDM management plan for the 1992 season. This revised plan was in effect from 1992 through 1995, and included two significant changes as follows:

- 1) The area in the Northwest Stepovak Section to be managed on a local stock basis was reduced to include only the waters of Orzinski Bay; the Stepovak Flats Section would continue to be managed on the basis of the Stepovak River chum salmon stock (Appendix C.1).
- 2) The allowable harvest of sockeye salmon in the SEDM fishery (exclusive of Orzinski Bay) through July 25 was increased from 6.0% to 7.0% of the total Chignik bound sockeye salmon catch.

From 1992 through 1995, only Orzinski Bay was managed on local stocks, and 7% of the total Chignik bound sockeye salmon harvest through July 25 was allocated to the SEDM fishery. During 1992-95, the harvest of Chignik bound sockeye in the SEDM through July 25 averaged 113,258 fish and 6.9% of the total Chignik bound sockeye salmon harvest.

During their January 1996 meeting the BOF made the following changes to the SEDM salmon management plan that remained in effect through the 1997 season:

- 1) The area to be managed on a local stock basis was increased from only Orzinski Bay to the entire Northwest Stepovak Section (Appendix C.1). Prior to July 1, the entire Northwest Stepovak Section will be managed on an allocation based on the strength of the Chignik sockeye salmon runs as described in 5 AAC 09.360(a)(1) and (b)-(h). Beginning July 1, the Northwest Stepovak Section will be managed entirely on local stocks. The Stepovak Flats Section will continue to be managed on the basis of the Stepovak River chum salmon stocks.
- 2) The BOF decreased the percentage of sockeye salmon allocated to the SEDM fishery from 7% to 6% of the total Chignik bound sockeye harvest through July 25. This BOF action was taken in an attempt to maintain traditional harvest levels of Chignik bound sockeye salmon in the SEDM fishery and to compensate for the increased area managed for local Orzinski Lake stocks.
- 3) The BOF established a closed waters area encompassing Kupreanof Point (55°33.98' N. lat., 159°35.88' W. long.), as described in 5 AAC 09.350(38), from July 6 through August 31 (Appendix C.7).

During their January 1998 meeting, the BOF made the following changes affecting the post June management plan:

1. For the period from July 6 through 21: six 24 hour fishing periods may be permitted, each fishing period must be followed by a closure of at least 48 hours in non-terminal locations (Cold Bay, Morzhovoi Bay, Thin Point, Zachary Bay (282-35), Pavlov Bay, and Canoe Bay sections) outside of the Southeastern District Mainland (Appendix D.5.).
2. For the period from July 22 through 31: fishing time will be limited in non-terminal areas (Cold Bay, Morzhovoi Bay, Thin Point, Zachary Bay (282-35), Pavlov Bay, Canoe Bay, Deer Island, Belkofski Bay, Mino Creek-Little Coal Bay, and after July 25, Suzy Creek (281-65), and Stepovak Flats sections), outside of the Southeastern District Mainland (prior to July 26), to three periods not to exceed 36 hours in duration and interspersed by closures of at least 48 hours. The amount of fishing area considered "terminal" was increased during this period. Fishing in non-terminal areas could not begin before noon on July 23 (during this period) (Appendix D.6).
3. A 60,000 coho salmon harvest cap was established for non-terminal areas during July 22 through 31.

Post June Fishery

In November 1991, the BOF established the Post June Salmon Management Plan for the South Alaska Peninsula (5 AAC 09.366; McCullough 1995). Under this new plan, commercial salmon fishing from July 6-19 would be restricted to terminal fishing areas opened by emergency order, based on local stock run strength as determined by harvest and escapement rates. The balance of the South Peninsula formerly opened in post June fisheries would remain closed (Appendix D.2). The BOF decided that local pink and chum salmon could be caught in terminal areas early in the season without sacrificing product quality, and still allow migratory salmon to pass through South Peninsula waters. The BOF concluded that after July 19, South Peninsula permit holders needed to harvest pink salmon in their traditional cape fishing areas to maintain product quality and to allow for available processing capacity. The terminal areas included Zachary Bay, the northern portion of Pavlov Bay, and the Cold Bay, Thin Point, Canoe Bay, and Morzhovoi Bay Sections (Appendix D.3). From July 20 until the close of the season, the entire South Peninsula could be opened to commercial salmon fishing by emergency order based on local run stock strength (except in the Southeastern District Mainland fishery through July 25; ADF&G 1996).

The Stepovak-Shumagin Setnet Association sued the BOF in early 1992, to stop the implementation of the Post June Salmon Management Plan for the South Alaska Peninsula (5 AAC 09.366). On July 10, 1992, Alaska State Superior Court Judge Hopwood (Third Judicial District, Kodiak) granted an injunction staying the enforcement of the new management plan. On July 13, management of the post June fisheries reverted back to pre 1992 policies (Shaul et al. 1993).

In March 1993, the Alaska State Superior Court reconsidered the 1992 injunction staying the enforcement of the Post June Salmon Management Plan. After reconsideration, the court agreed with the State of Alaska and reinstated the Post June Salmon Management Plan. That version of the

post June management plan was fully implemented during the 1993 through 1997 commercial fishing seasons (Shaul and Campbell, 1997).

During the January 1998 BOF meeting the following changes affecting the post June fishery, including some potential benefits to permit holders and processors were enacted:

During the July 6-21 time period:

1. Increased fishing opportunities in early July in non-terminal areas, limited fishing periods to a maximum of 24 hours, followed by minimum 48-hour closures to protect migrating sockeye and chum salmon (Appendix D.5).
2. Allowed permit holders the opportunity to recruit and maintain crewmembers, which have been idle in recent years, because most of the South Peninsula has been closed to commercial salmon fishing from late June until late July.
3. Made additional salmon available to local processors in early July.

During the July 22-31 time period:

1. Reduced overall fishing time and restricted continuous fishing in late July in non-terminal areas, to reduce the harvest of migrating sockeye and coho salmon stocks (Appendix D.6).
2. Established a 60,000 coho salmon harvest cap in non-terminal areas from July 22-31, to reduce the harvest of migrating coho salmon.
Allowed longer (i.e., 36 hour versus 24 hour) fishing periods from July 22-31 than during July 6-21 in non-terminal areas, to increase the harvest of local pink salmon during the peak of the run. Fishing periods followed by minimum 48-hour closures to protect migrating sockeye and coho salmon.
3. Expanded the terminal harvest areas.

Immature Salmon Concerns

Another factor in the 1991 BOF decision to allow commercial salmon fishing only in limited areas within South Peninsula waters were concerns for immature salmon (chinook, sockeye, and chum) which are inadvertently gilled in normal purse seine gear fishing operations (McCullough and Shaul 1992).

The department first became aware of immature salmon catches in 1963. The presence of immature salmon in South Peninsula waters has warranted restrictions to commercial fishing in some years. These restrictions were applied to all gear types, in affected areas during late June through July in 1963, 1968, 1969, 1974, 1979, and for purse seine fishing only during the 1989-92, 1994, and 1999 seasons (McCullough et al. 1995).

Immature salmon have been most prevalent in the Shumagin Islands Section and the concern for catching immature salmon is restricted to purse seine gear. Under current regulations, seine mesh size may not exceed 3-1/2 inches except for the first 25 meshes above the lead line, which may not exceed 7 inches (ADF&G 1998). The gillnet gear has larger mesh size (minimum of 5-1/4 inches) which allows the immature salmon to pass through unaffected. After 1979, regulations were adopted curtailing only purse seine fishing in affected areas (McCullough 1995). Immature salmon usually migrate out of the area by July 23, although in 1992 closures remained in effect until July 29.

In 1990, an ADF&G test fishing program was instituted in the Shumagin Islands to determine the presence and abundance of immature salmon in South Peninsula waters prior to commercial fishing periods in July. In the Shumagin Islands Section, most purse seine fishing effort occurs in the near shore waters of Popof Island from Popof Head to Red Bluff, so test fishing sites were established in those areas (Appendix D.4).

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